

Surprise study analysis

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2024-08-19

Study description

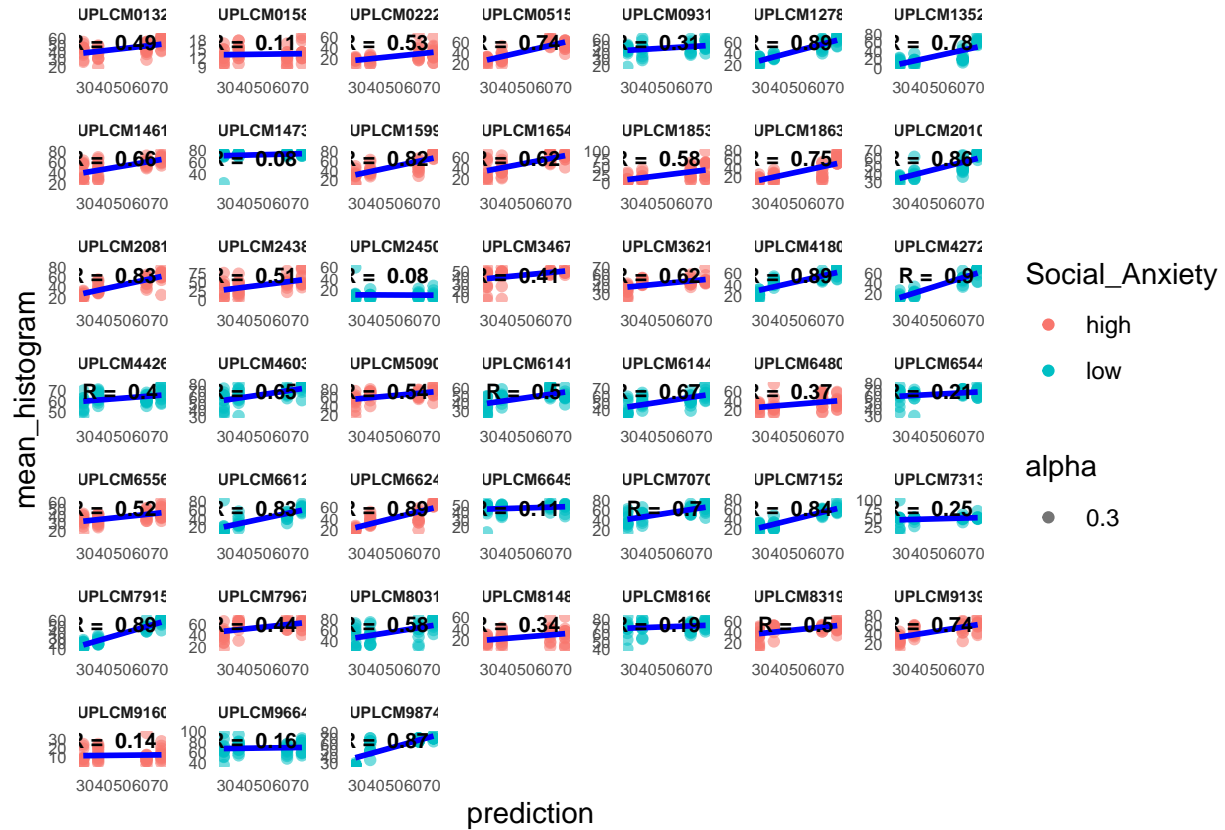
This is the first surprise study using the same task version as pilot 21. We had the following groups of participants with the experiment's corresponding Gorilla link: - Prolific aged 18-25 (n = 30): <https://app.gorilla.sc/admin/experiment/180921/design> - Prolific aged 26-45 (n = 38): <https://app.gorilla.sc/admin/experiment/185160/design> - School students aged 14-18 (n = 30): <https://app.gorilla.sc/admin/experiment/177048/design> - Community participants aged 18-25 (n = 24): <https://app.gorilla.sc/admin/experiment/180348/design>

The sample sizes include participants that potentially need to be excluded.

```
## # A tibble: 45 x 2
##   Random_ID_new Trial.Number
##   <chr>          <int>
## 1 SUPLCM01328      48
## 2 SUPLCM01588      48
## 3 SUPLCM02221      48
## 4 SUPLCM05151      48
## 5 SUPLCM09311      48
## 6 SUPLCM12782      48
## 7 SUPLCM13522      48
## 8 SUPLCM14619      48
## 9 SUPLCM14738      48
## 10 SUPLCM15998     48
## # i 35 more rows
```

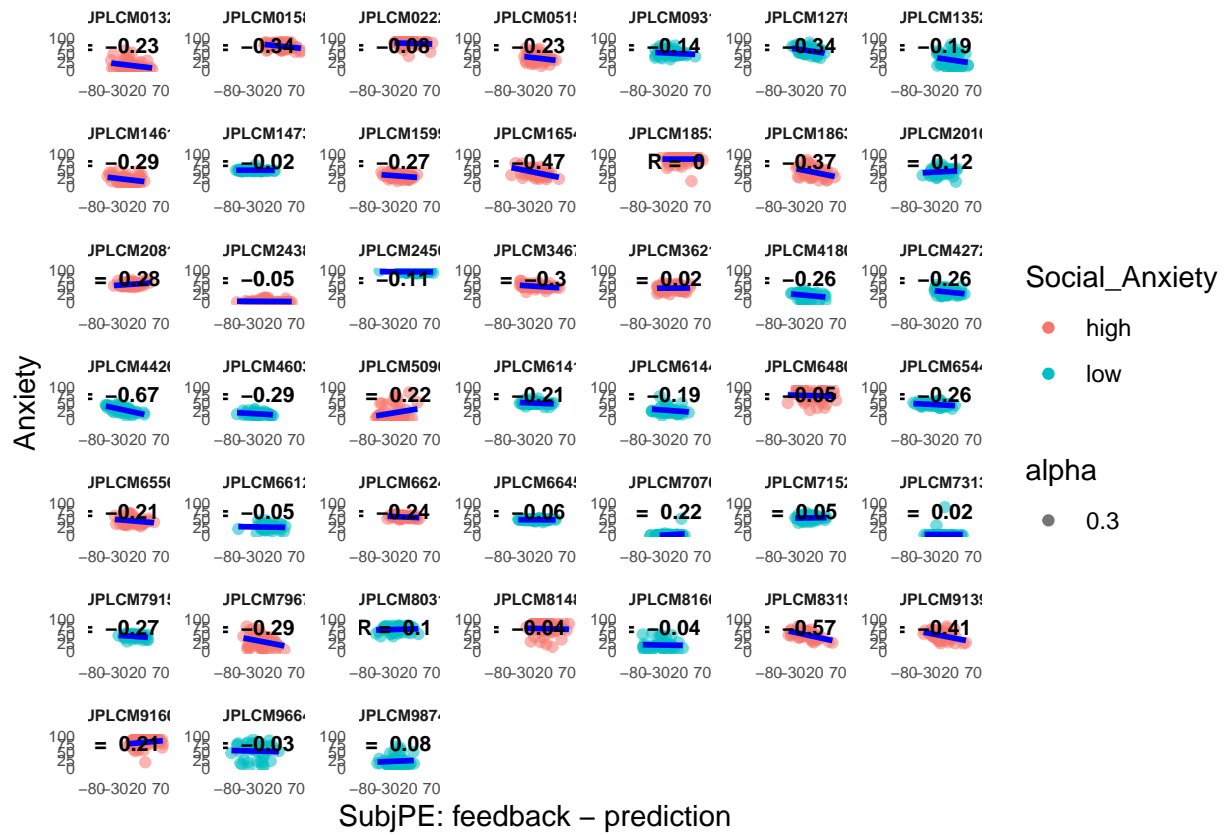
Relationship between prediction and mean histograms (4x only in the beginning)

[1] "average correlation between mean_hist and prediction: 0.551116398117538"



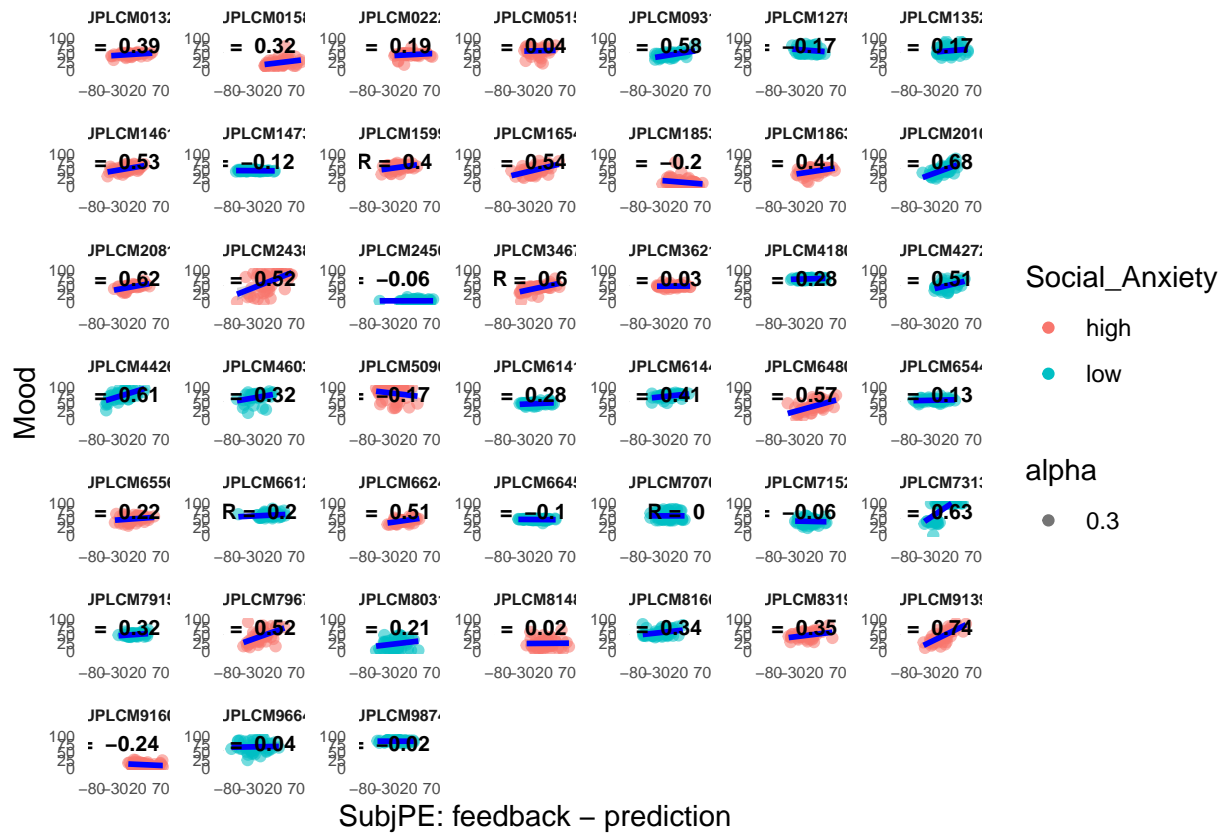
Relationship between Anxiety and SubjPE

[1] "average correlation between anxiety and SubjPE: -0.145065538931356"



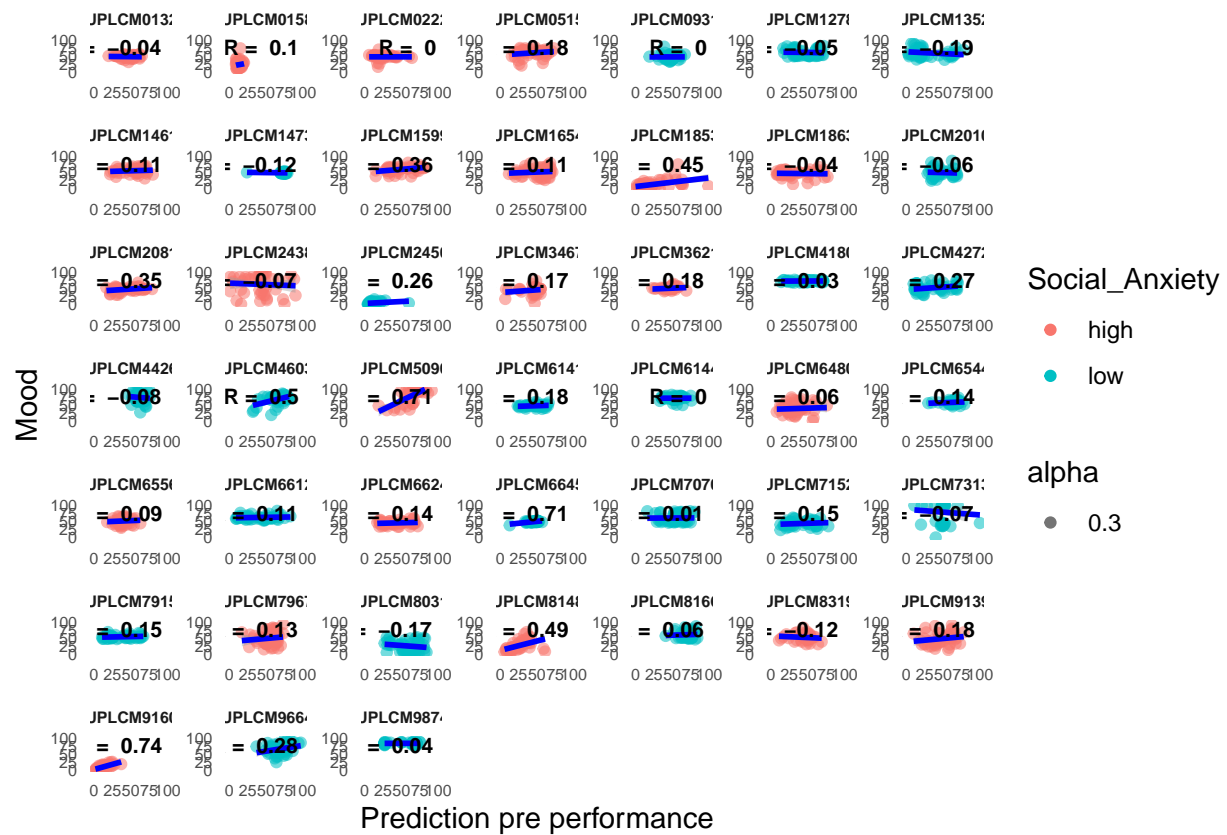
Relationship between Mood and SubjPE

[1] "average correlation between mood and SubjPE: 0.267980134168208"



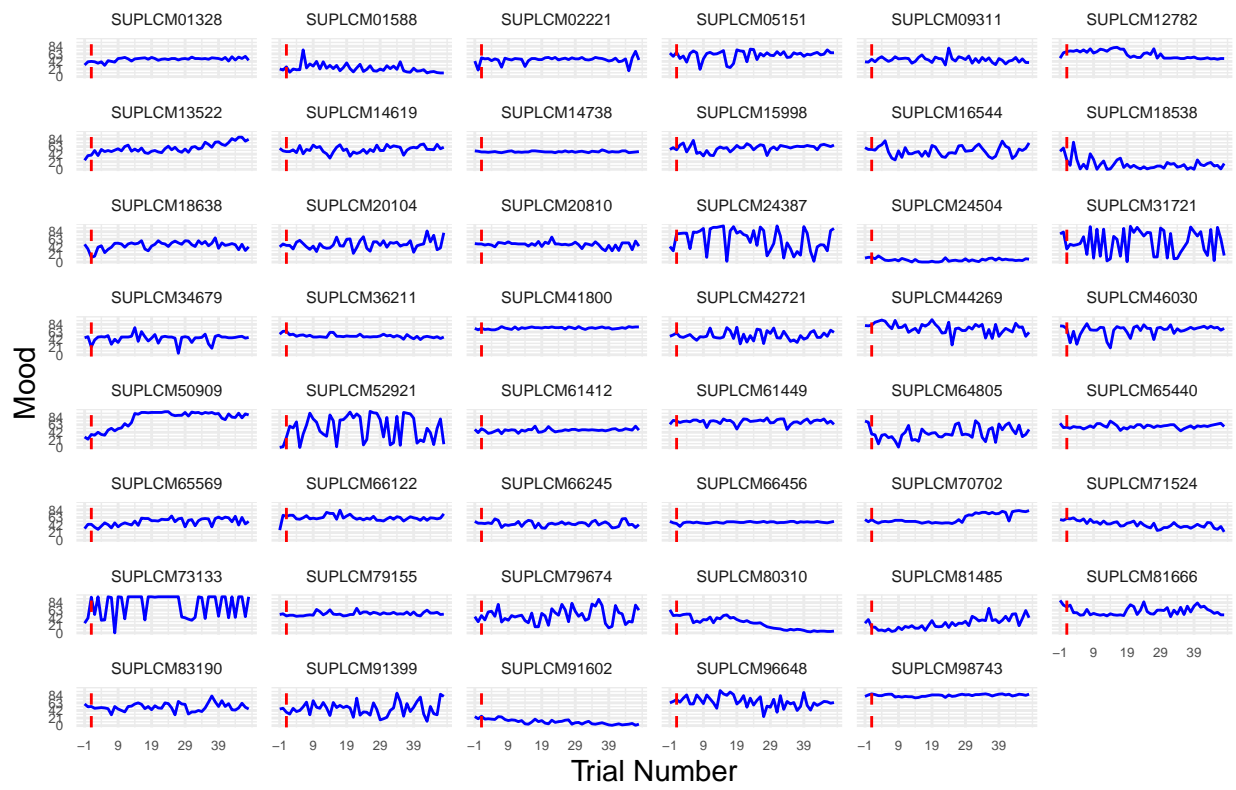
Relationship between Mood and prediction (pre-performance)

[1] "average correlation between mood and prediction before performance: 0.142634395378829"



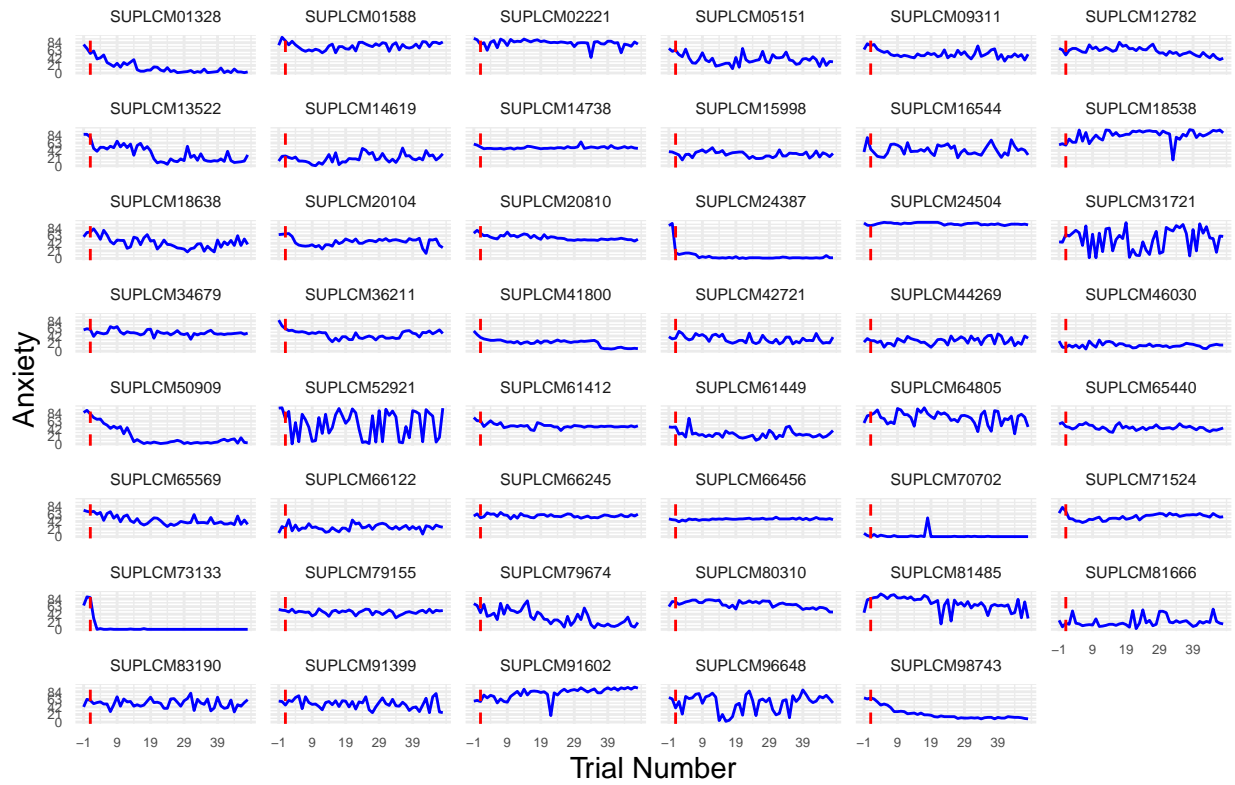
Mood over time

Mood across time



Anxiety over time

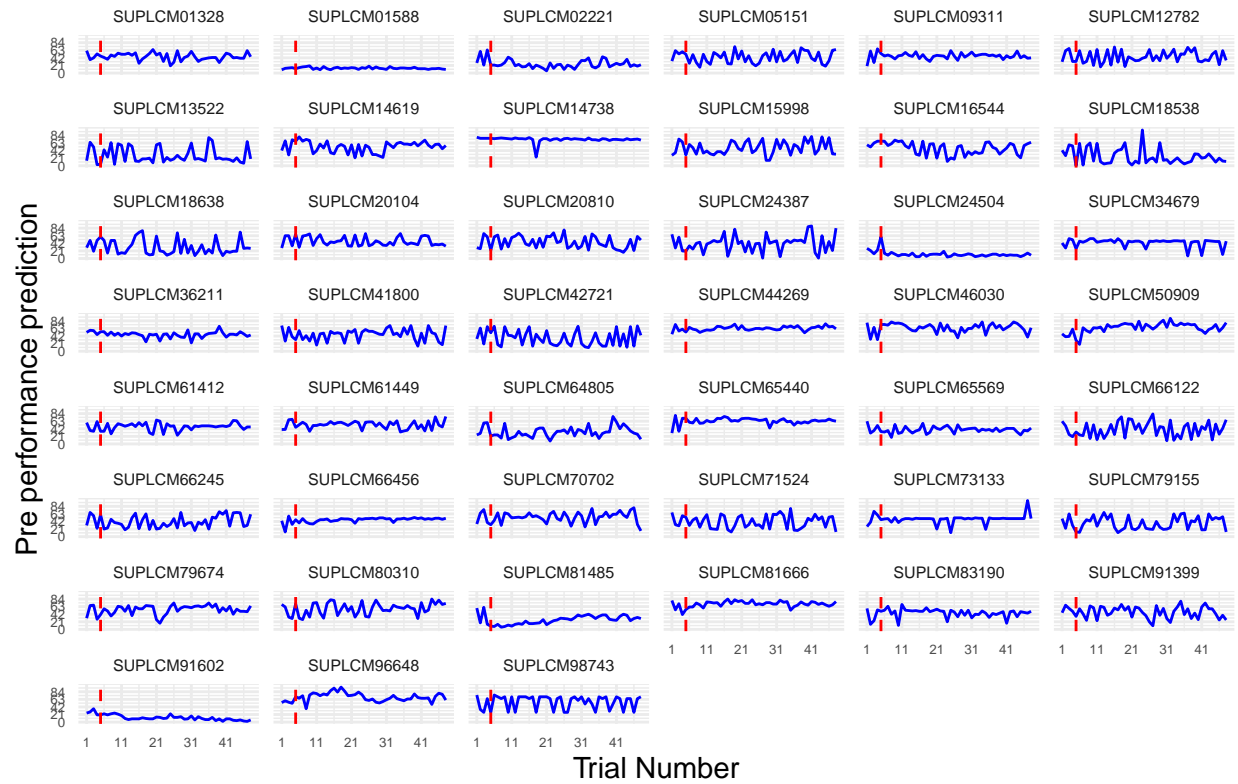
Anxiety across time



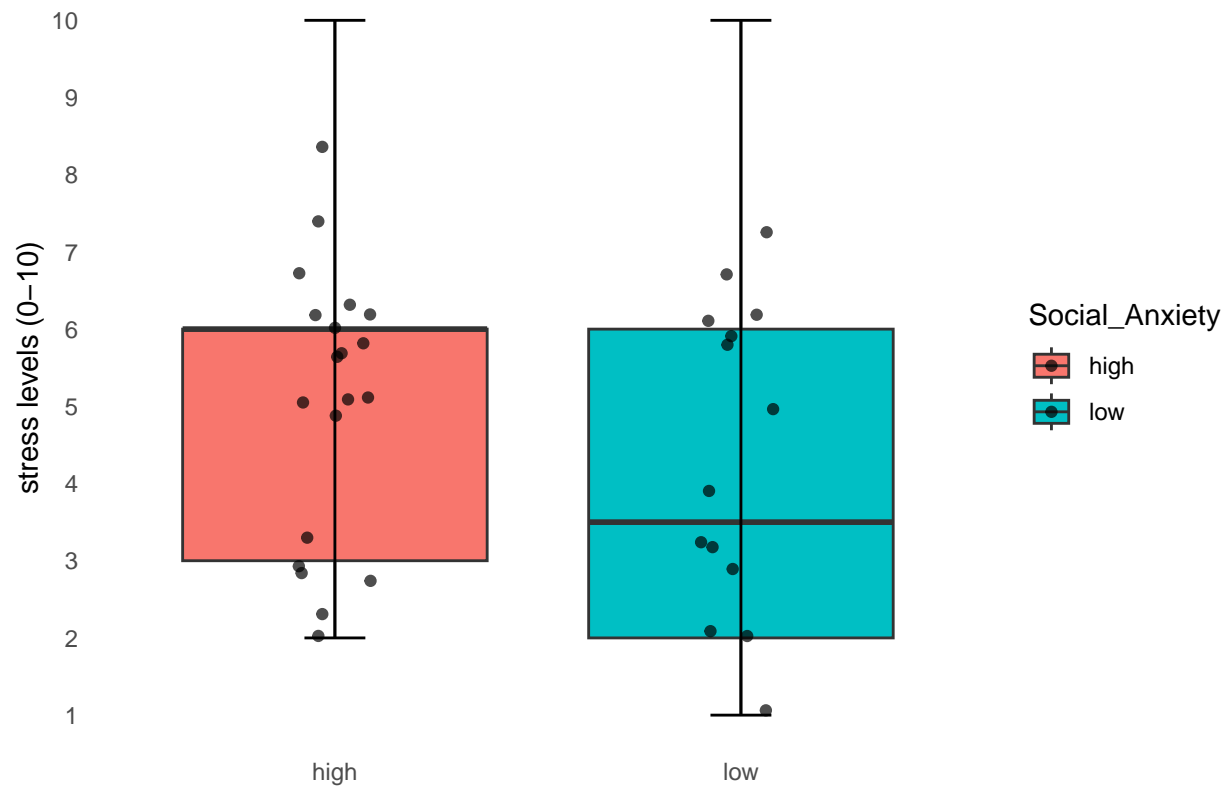
Prediction before performance over time

Red line presents until what points histograms were presented (4 first trials only).

Prediction before performance across time



Stress levels and social anxiety



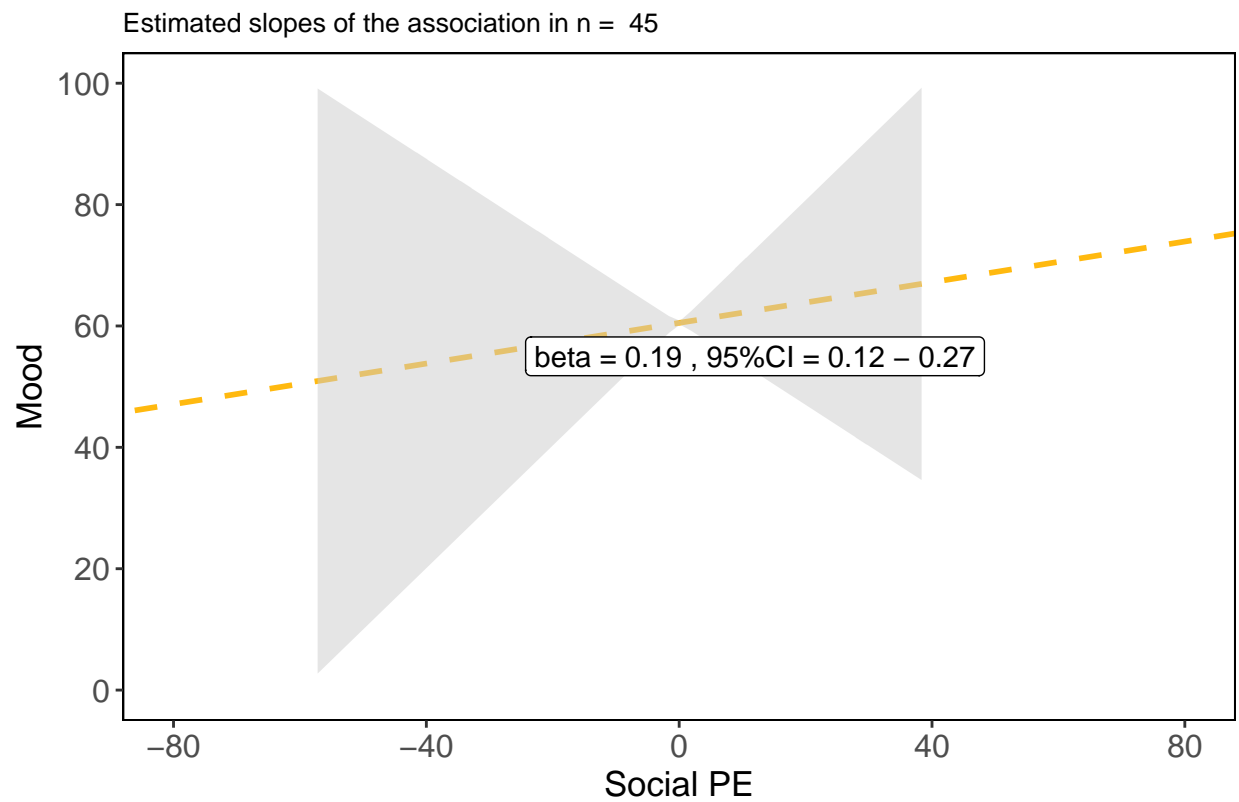
LME models for Mood and SubjPE

The best model seems to be: $\text{Mood} \sim \text{SubjPE} + \text{mini_SPIN_total} + (\text{SubjPE} \mid \text{Random_ID_new})$

[1] 16953.11

[1] 17148.59

[1] 16949.56



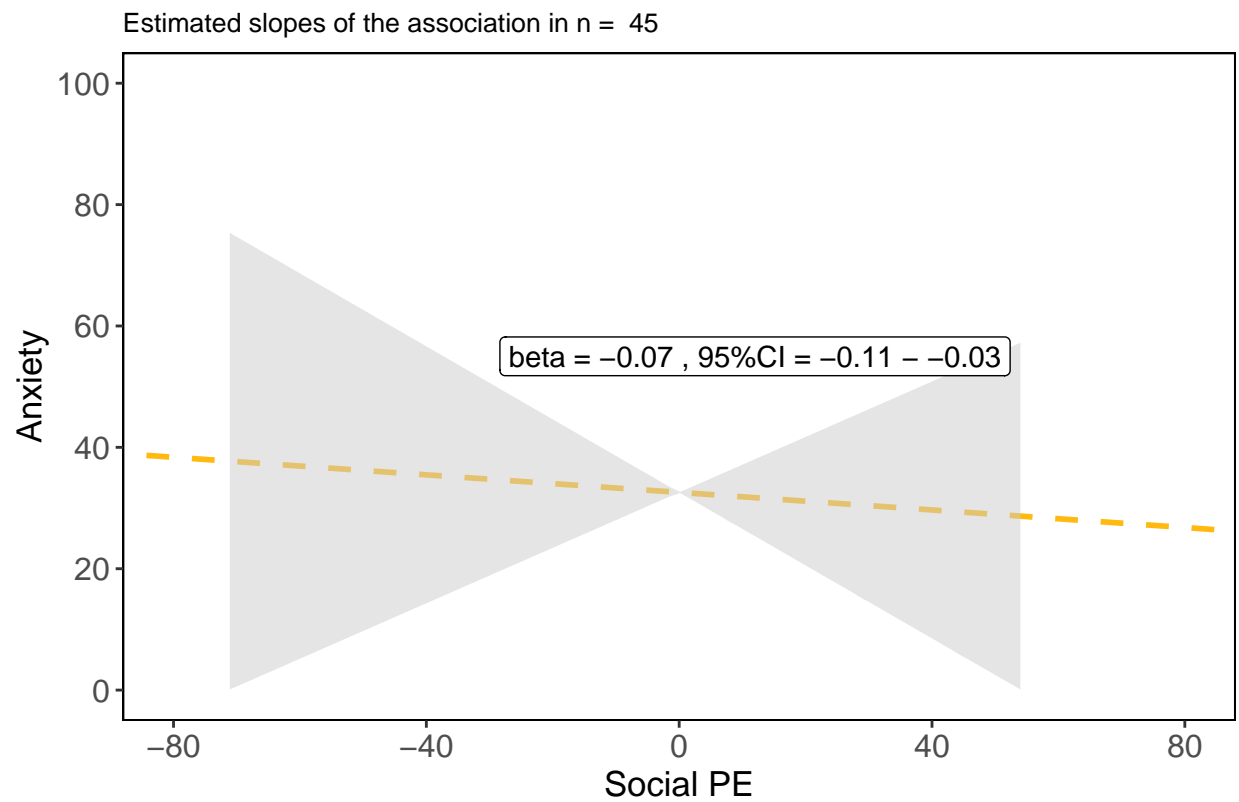
LME models for Anxiety and SubjPE

The best model seems to be: $\text{Anxiety} \sim \text{SubjPE} + \text{mini_SPIN_total} + (\text{SubjPE} \mid \text{Random_ID_new})$

[1] 17091.37

[1] 17103.07

[1] 17087.82



ICC for Mood

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.644
##     Unadjusted ICC: 0.644
```

ICC for Anxiety

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.773
##     Unadjusted ICC: 0.773
```