Surprise study analysis

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Study description

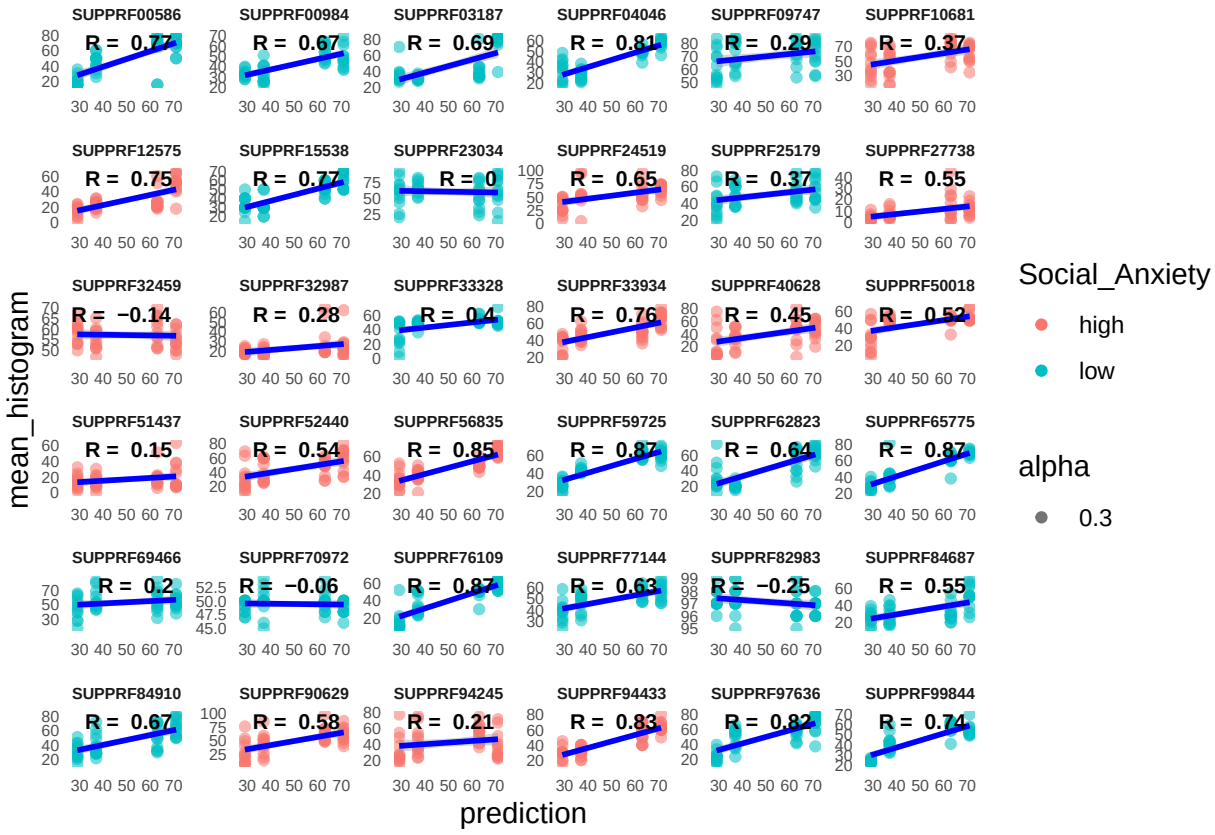
This is the first surprise study using the same task version as pilot 21. We had the following groups of participants with the experiment's corresponding Gorilla link: - Prolific aged 18-25 (n = 30): https://app.gorilla.sc/admin/experiment/180921/design - Prolific aged 26-45 (n = 38): https://app.gorilla.sc/admin/experiment/185160/design - 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: 36 x 2
##    Random_ID   Trial.Number
##    <chr>              <int>
##  1 SUPPRF00586           48
##  2 SUPPRF00984           48
##  3 SUPPRF03187           48
##  4 SUPPRF04046           48
##  5 SUPPRF09747           48
##  6 SUPPRF10681           48
##  7 SUPPRF12575           48
##  8 SUPPRF15538           48
##  9 SUPPRF23034           48
## 10 SUPPRF24519           48
## # i 26 more rows
```

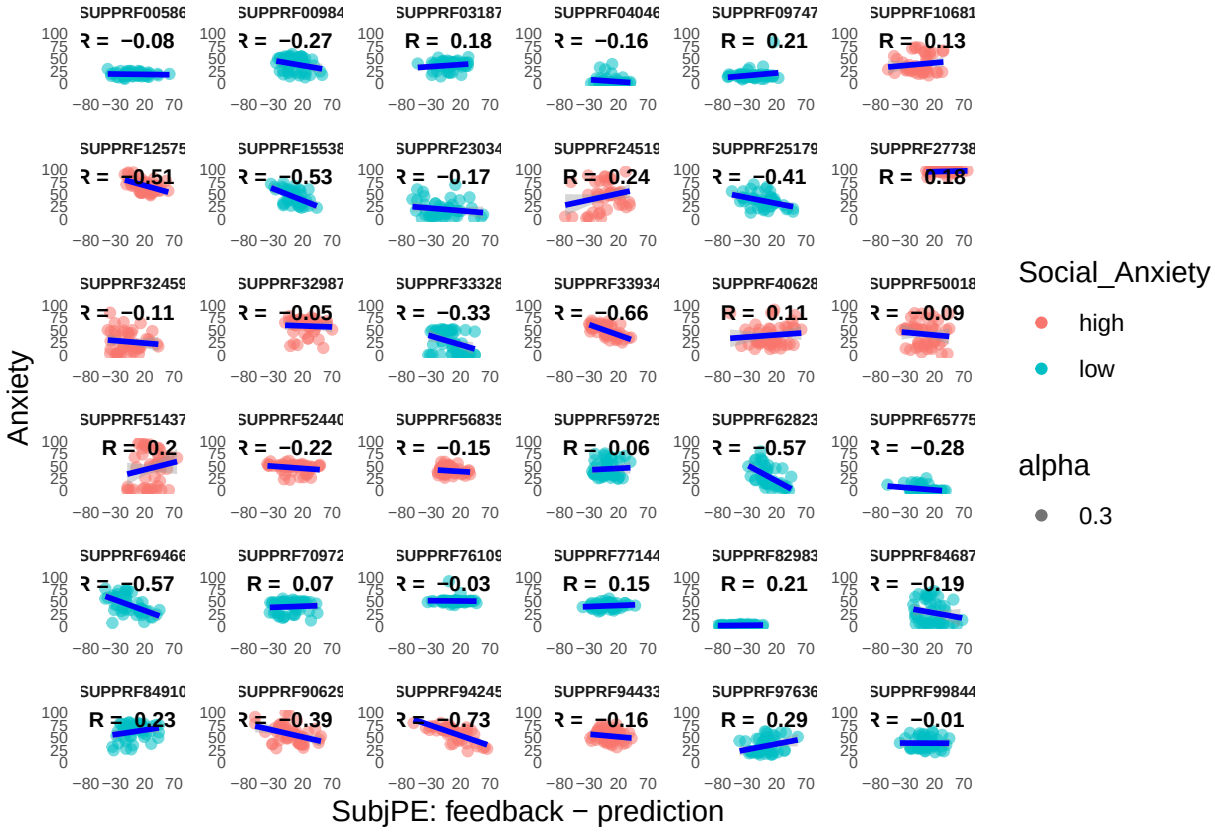
Relationship between prediction and mean histograms (4x only in the beginning)

```
## [1] "average correlation between mean_hist and prediction: 0.51830418127764"
```



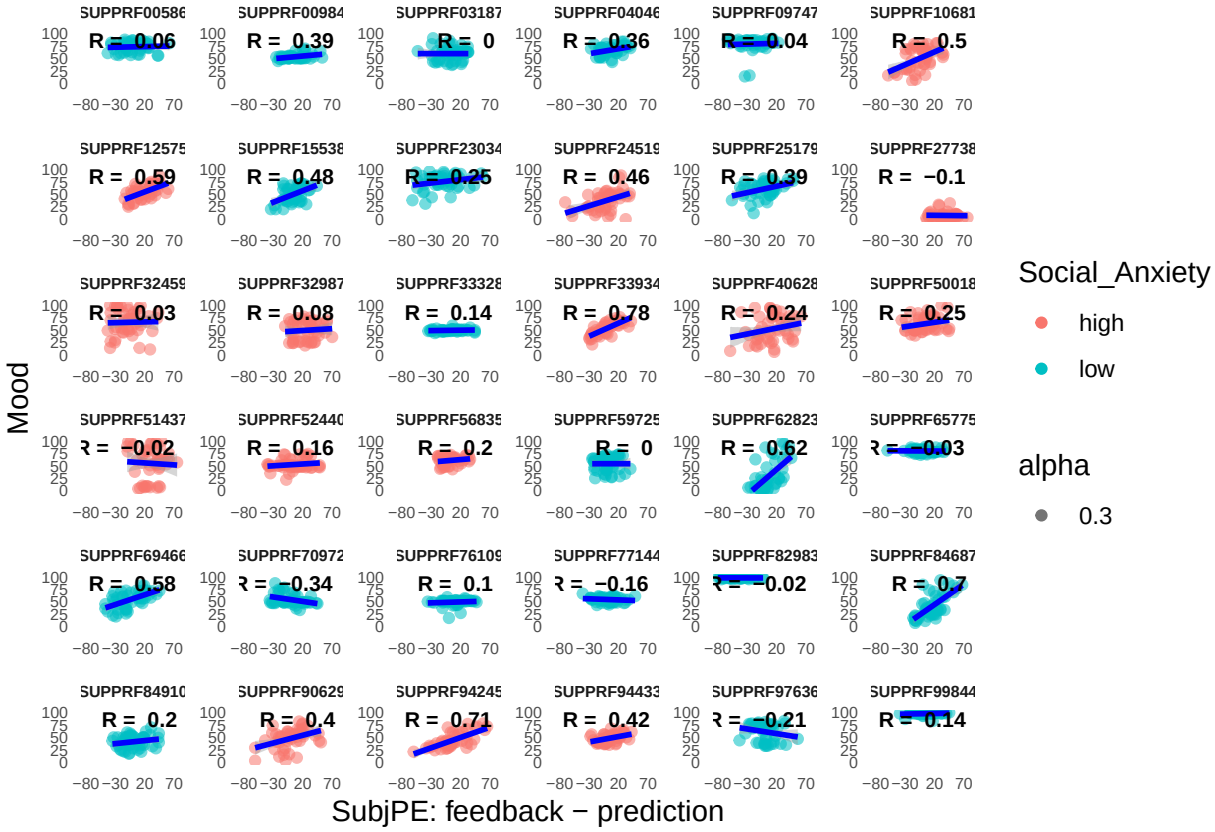
Relationship between Anxiety and SubjPE

```
## [1] "average correlation between anxiety and SubjPE: -0.12207558119399"
```

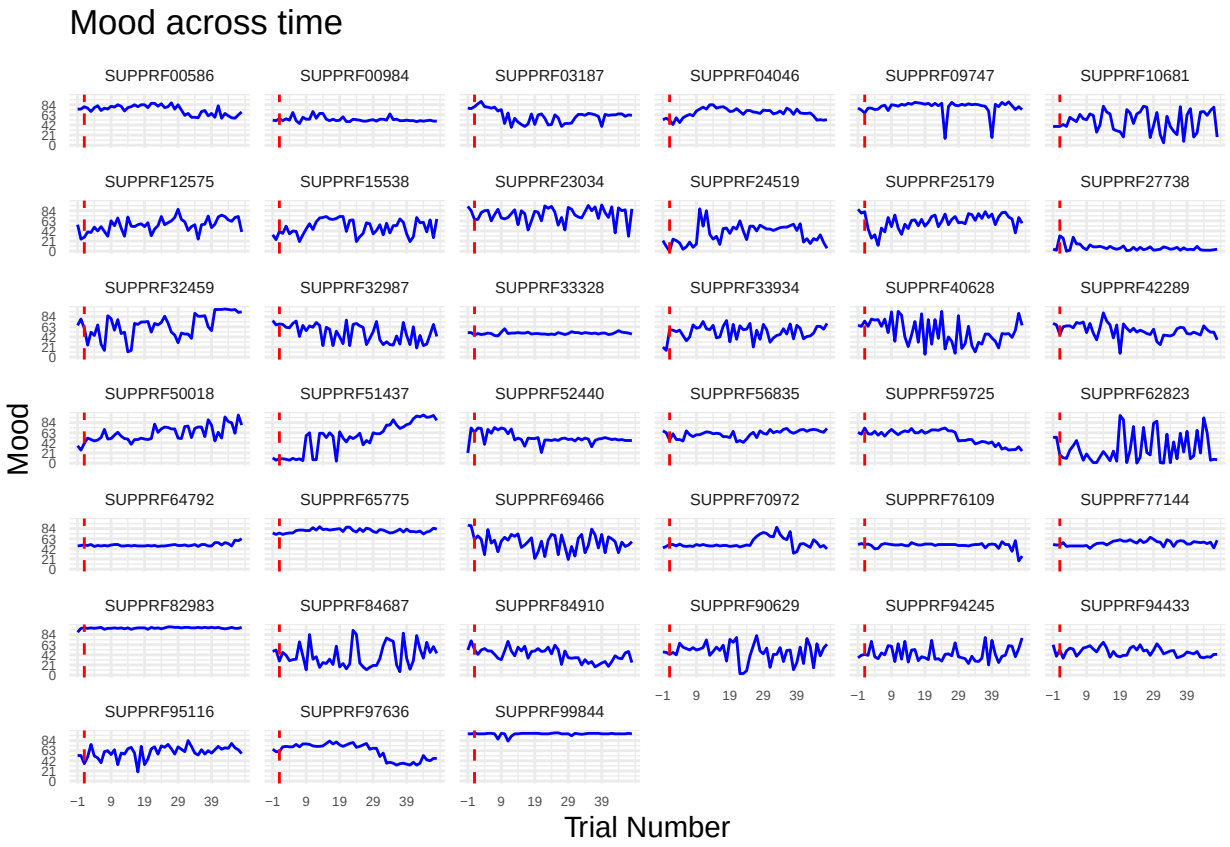


Relationship between Mood and SubjPE

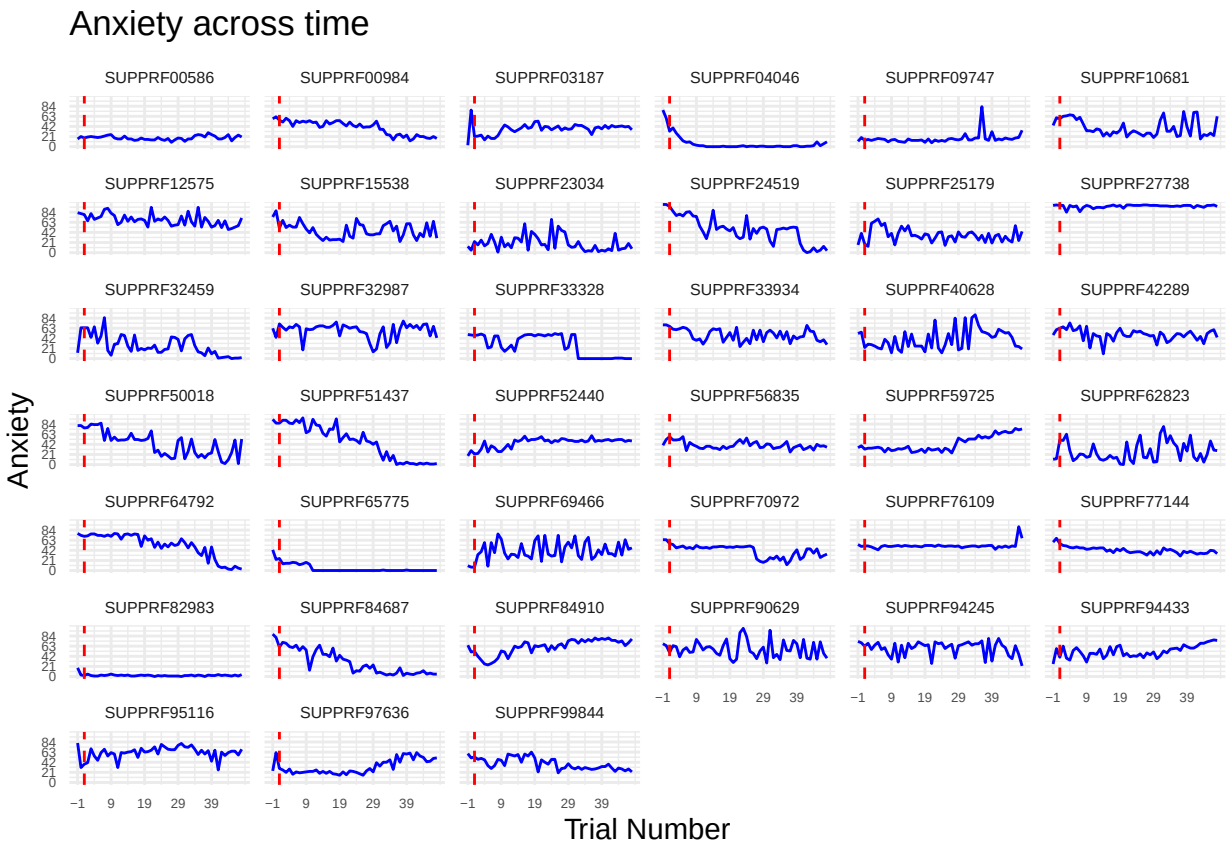
```
## [1] "average correlation between mood and SubjPE: 0.232495611969435"
```



Mood over time

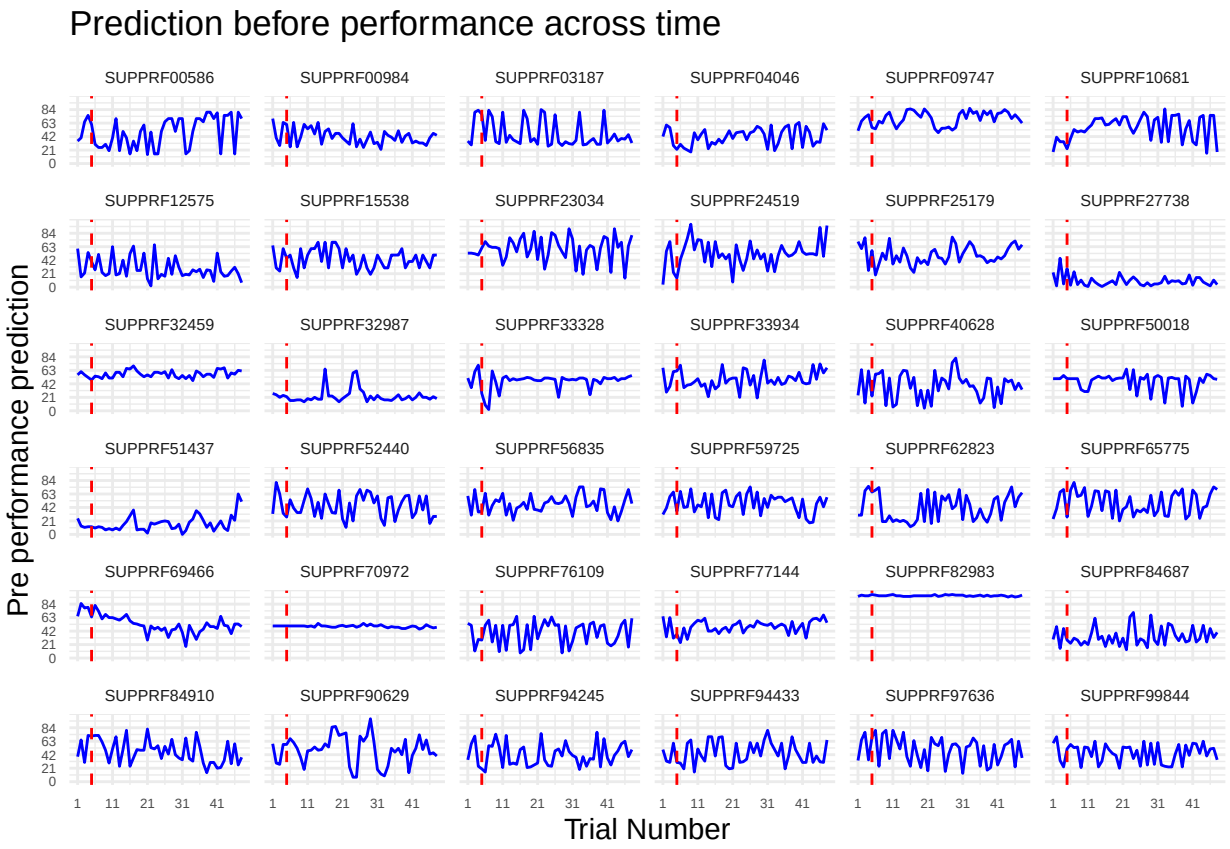


Anxiety over time

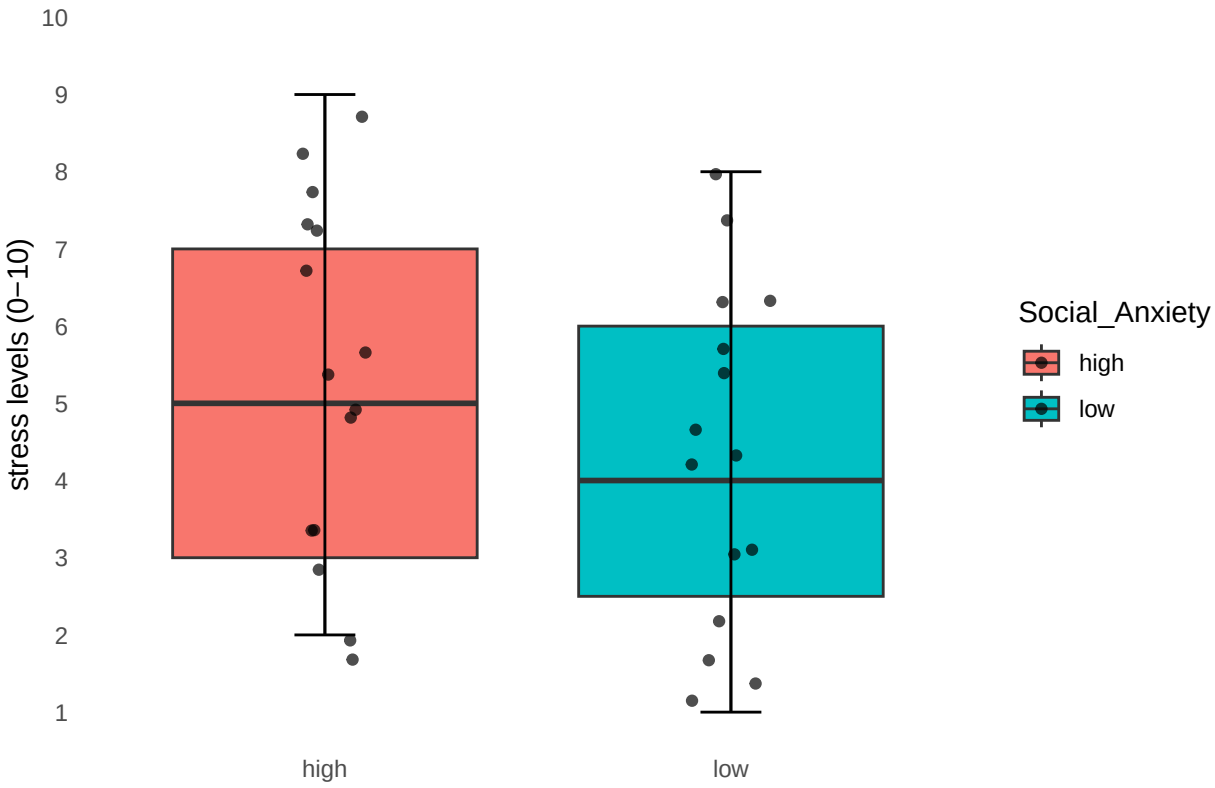


Prediction before performance over time

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



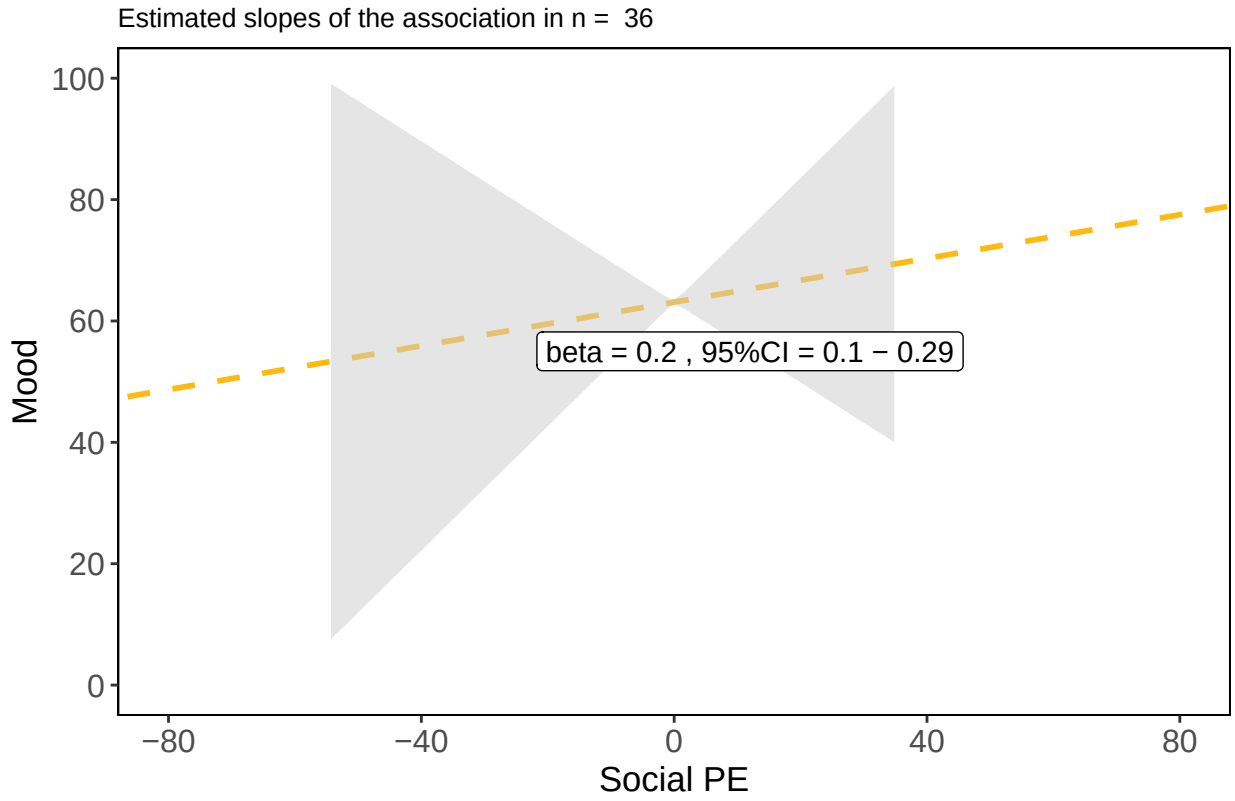
Stress levels and social anxiety



LME models for Mood and SubjPE

The best model seems to be: Mood ~ SubjPE + mini_SPIN_total + (SubjPE | Random_ID)

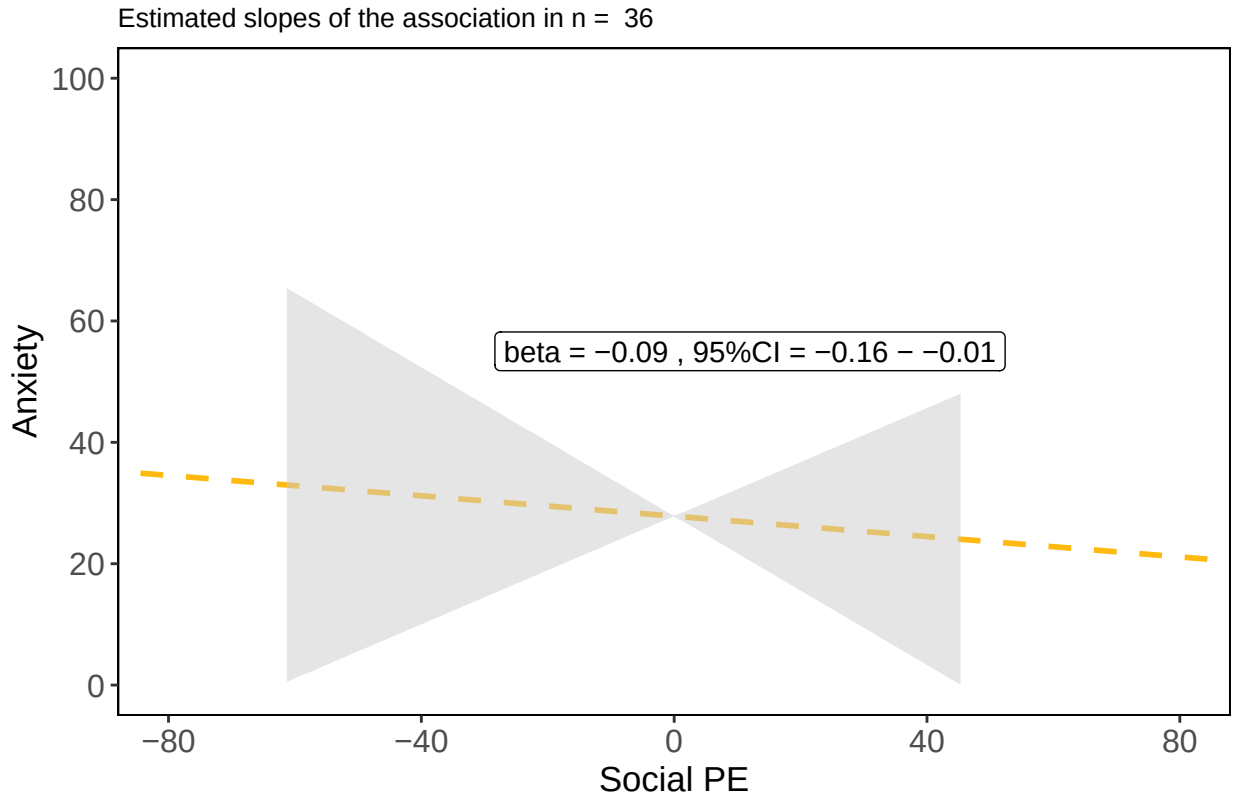
```
## [1] 14373.33
## [1] 14477.47
## [1] 14370.48
```



LME models for Anxiety and SubjPE

The best model seems to be: Anxiety ~ SubjPE + mini_SPIN_total + (SubjPE | Random_ID)

```
## [1] 14545.93
## [1] 14598.82
## [1] 14540.15
```



ICC for Mood

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.525
##   Unadjusted ICC: 0.525
```

ICC for Anxiety

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.566
##   Unadjusted ICC: 0.566
```