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.

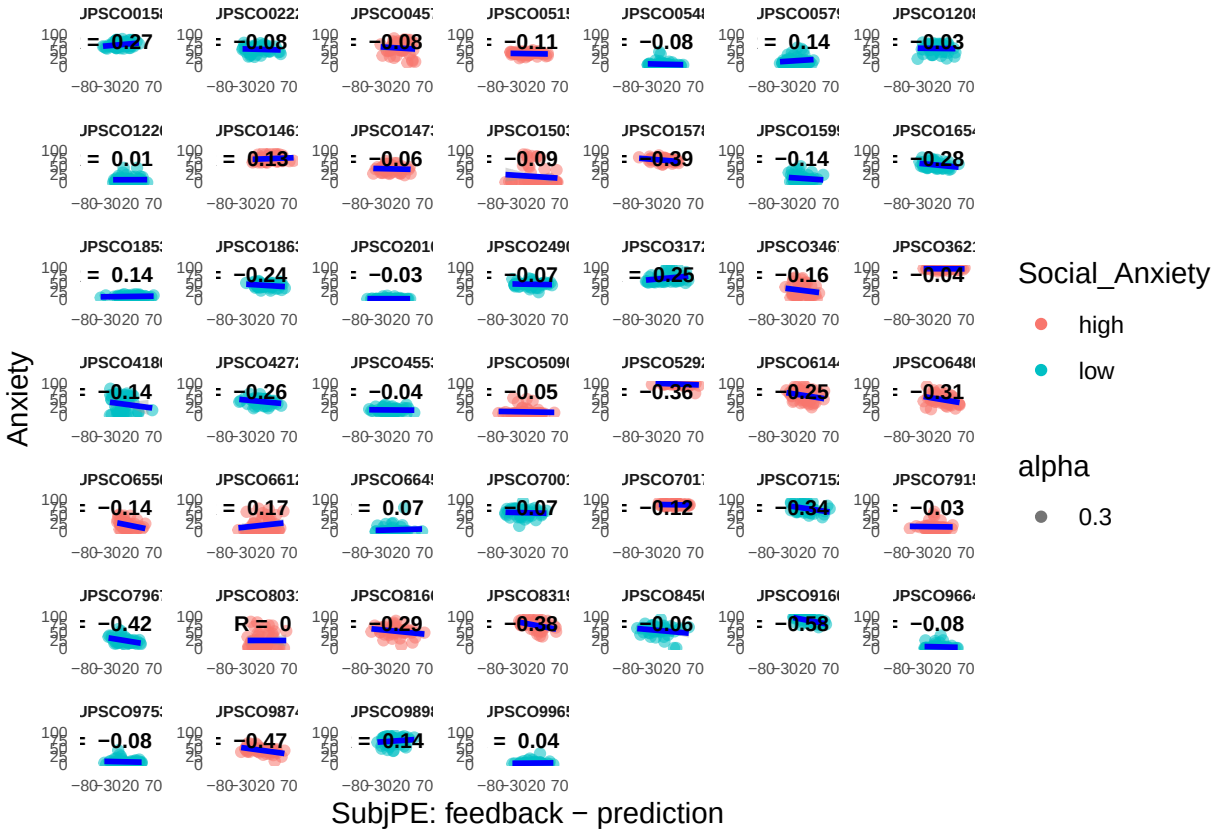
```
## # A tibble: 46 x 2
##    Random_ID_new Trial.Number
##    <chr>                <int>
##  1 SUPSCO01588             48
##  2 SUPSCO02221             48
##  3 SUPSCO04571             48
##  4 SUPSCO05151             48
##  5 SUPSCO05489             48
##  6 SUPSCO05791             48
##  7 SUPSCO12088             48
##  8 SUPSCO12262             48
##  9 SUPSCO14619             48
## 10 SUPSCO14738             48
## # i 36 more rows
```

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

```
## [1] "average correlation between mean_hist and prediction: 0.504431898229761"
```

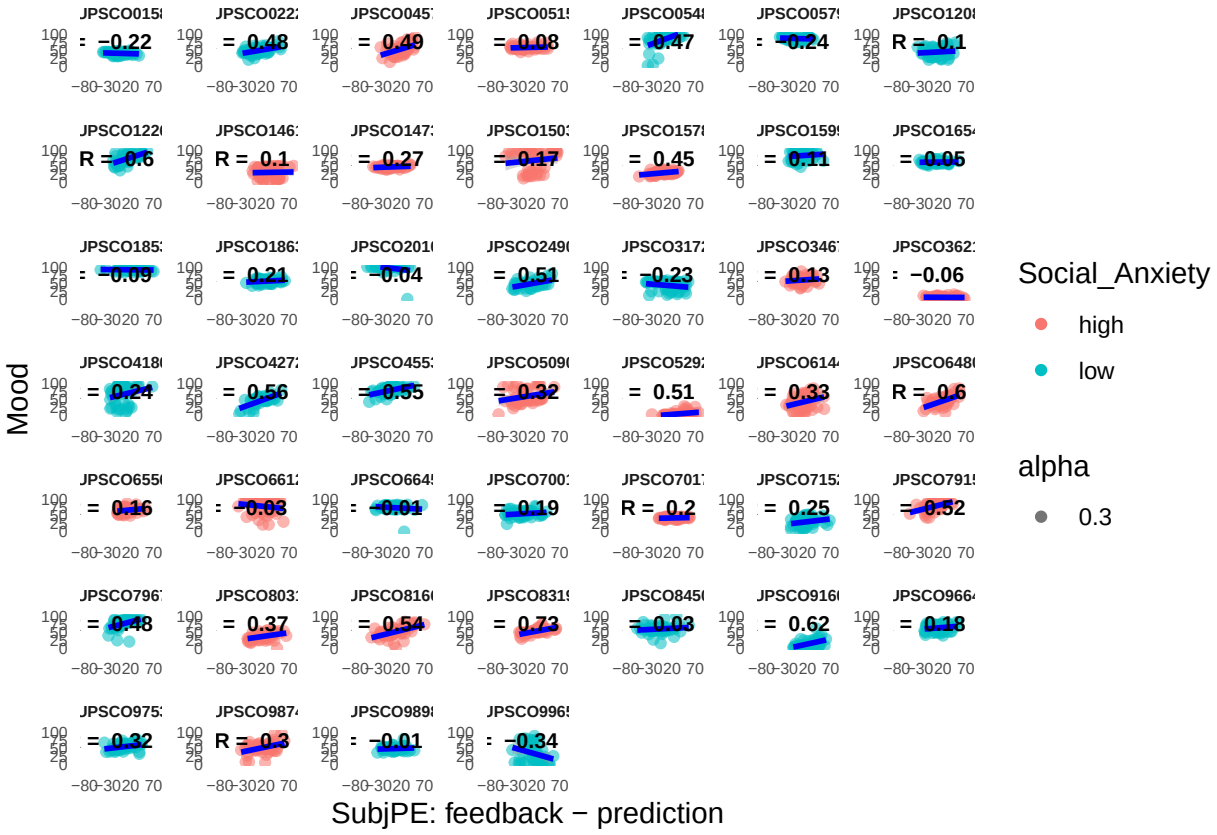
Relationship between Anxiety and SubjPE

```
## [1] "average correlation between anxiety and SubjPE: -0.108077546139548"
```



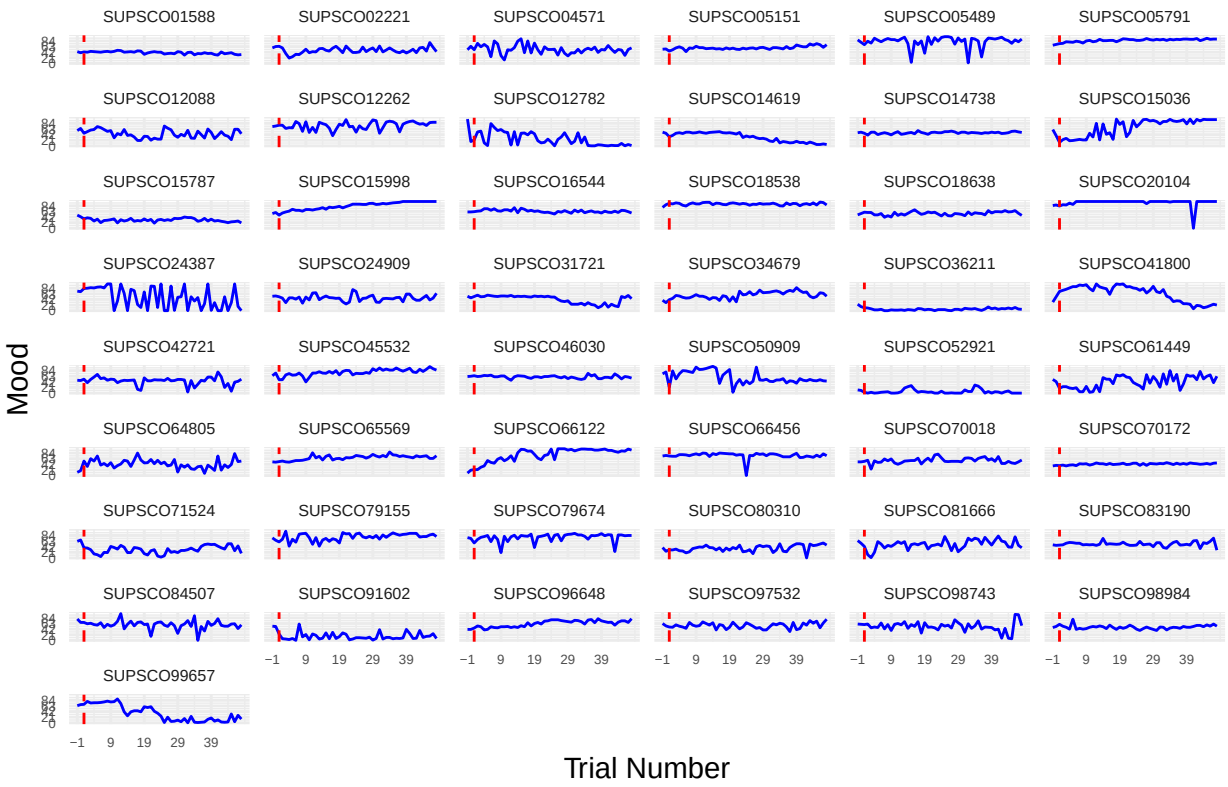
Relationship between Mood and SubjPE

```
## [1] "average correlation between mood and SubjPE: 0.238238427966342"
```

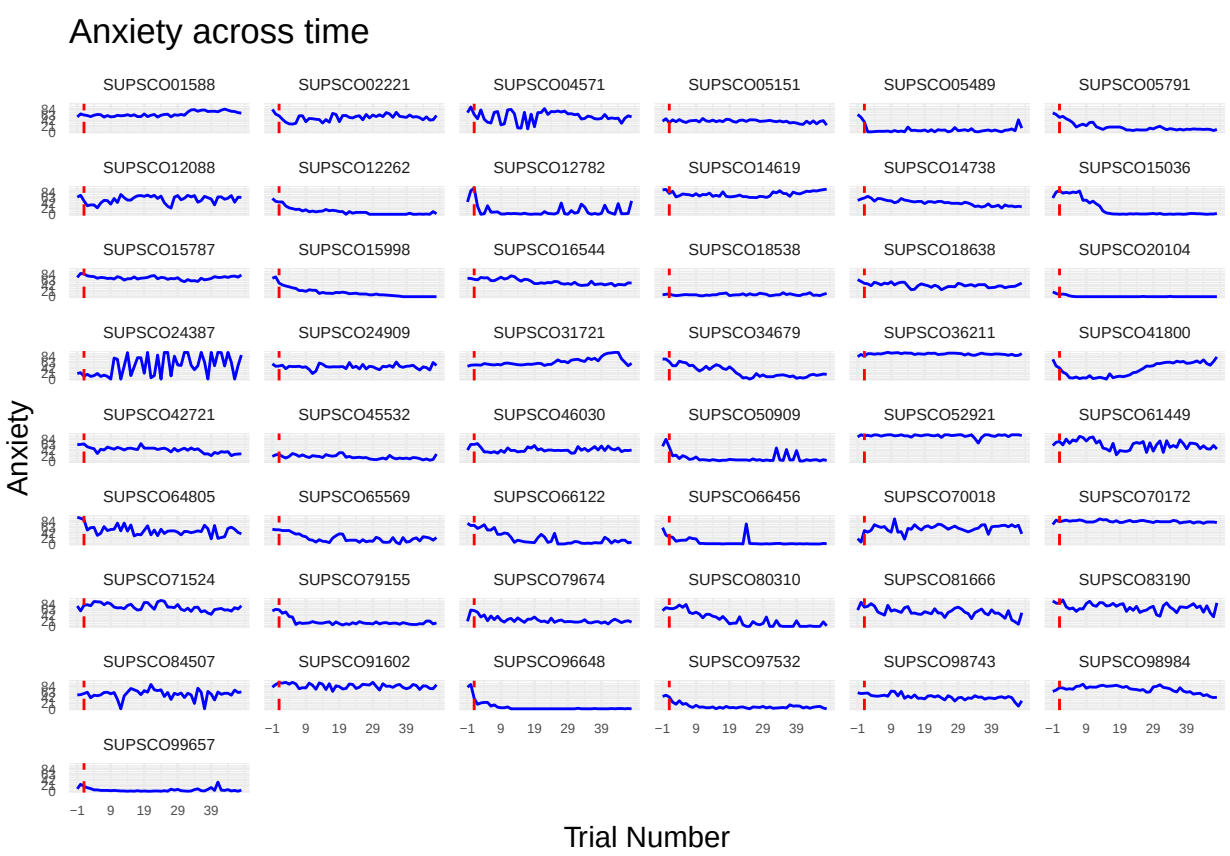


Mood over time

Mood across time

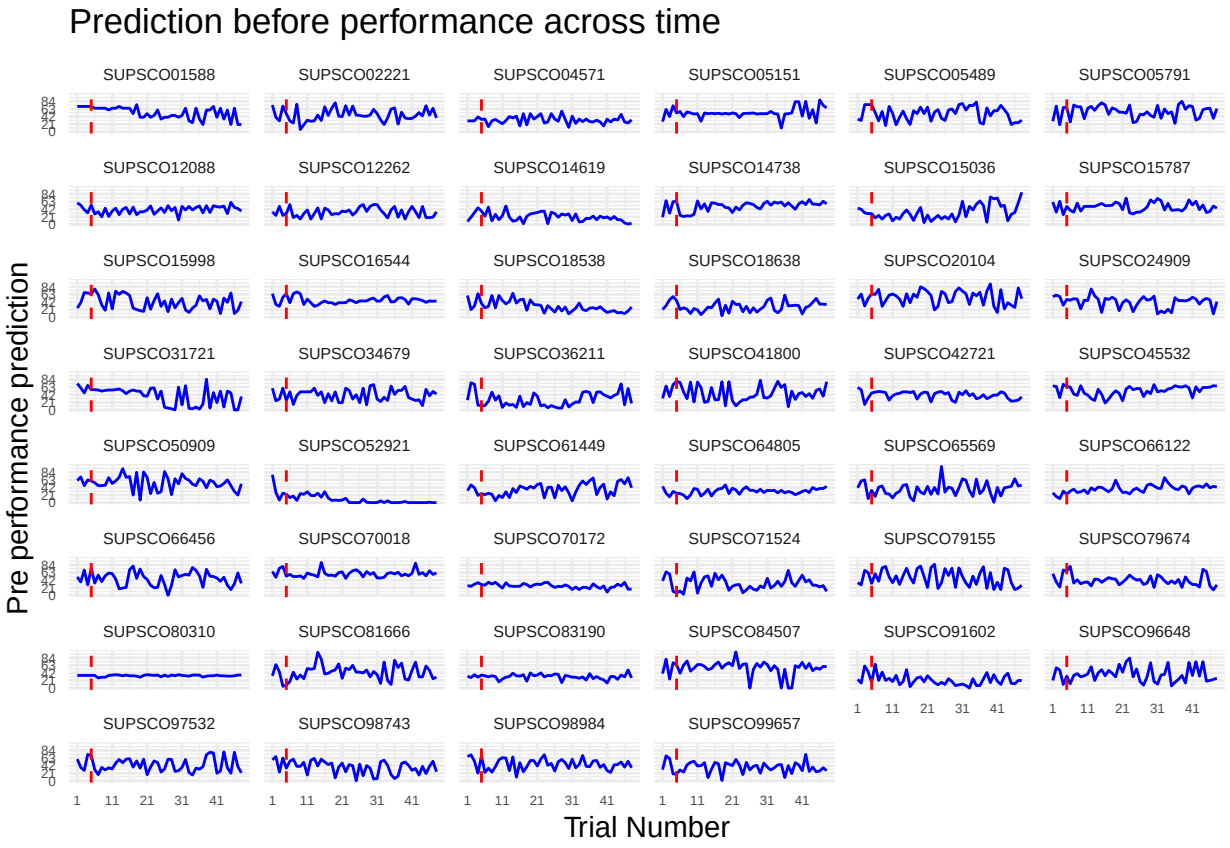


Anxiety over time

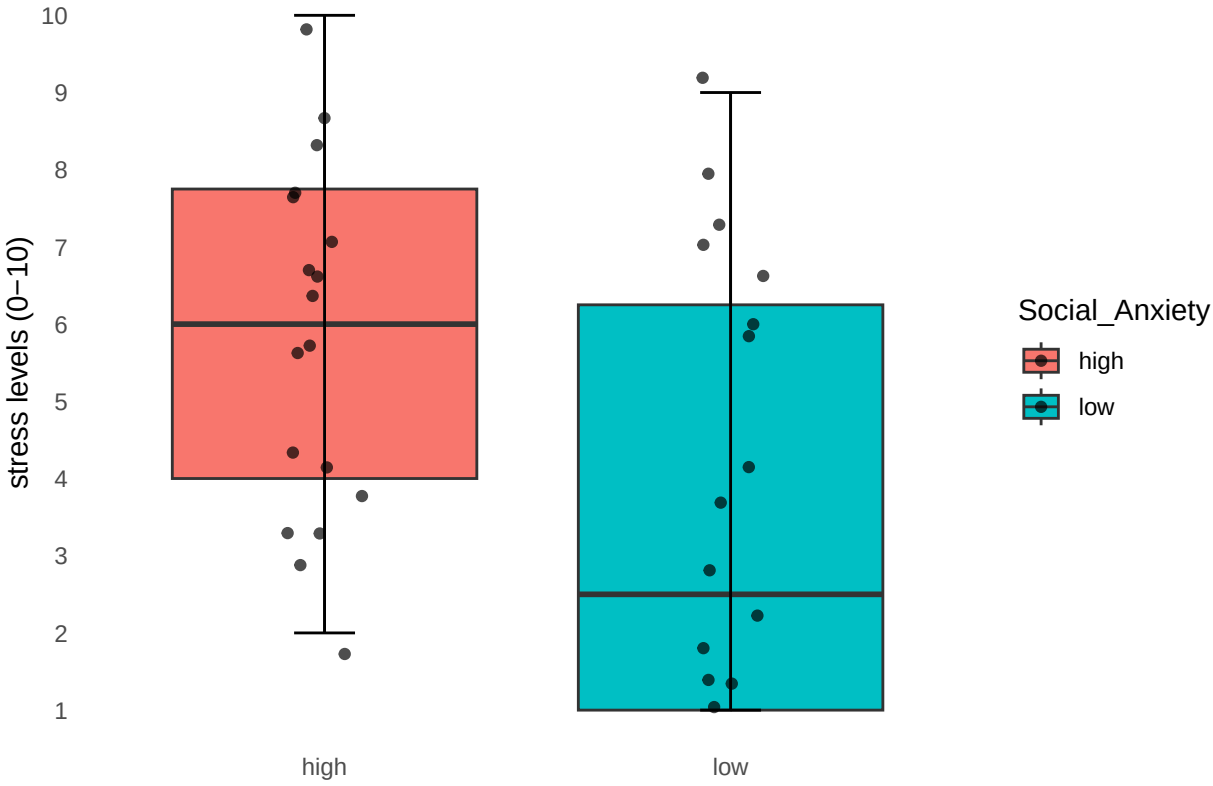


Prediction before performance over time

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



Stress levels and social anxiety



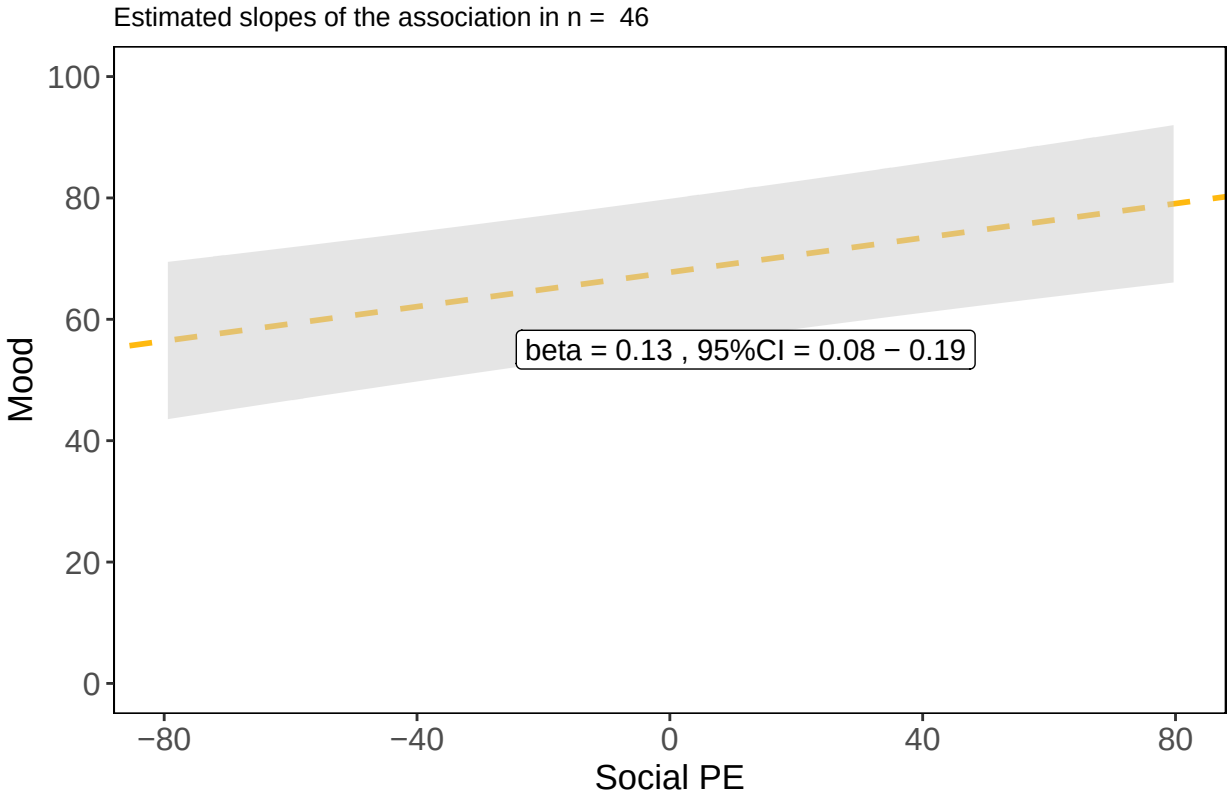
LME models for Mood and SubjPE

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

```
## [1] 18283.93
```

```
## [1] 18347.63
```

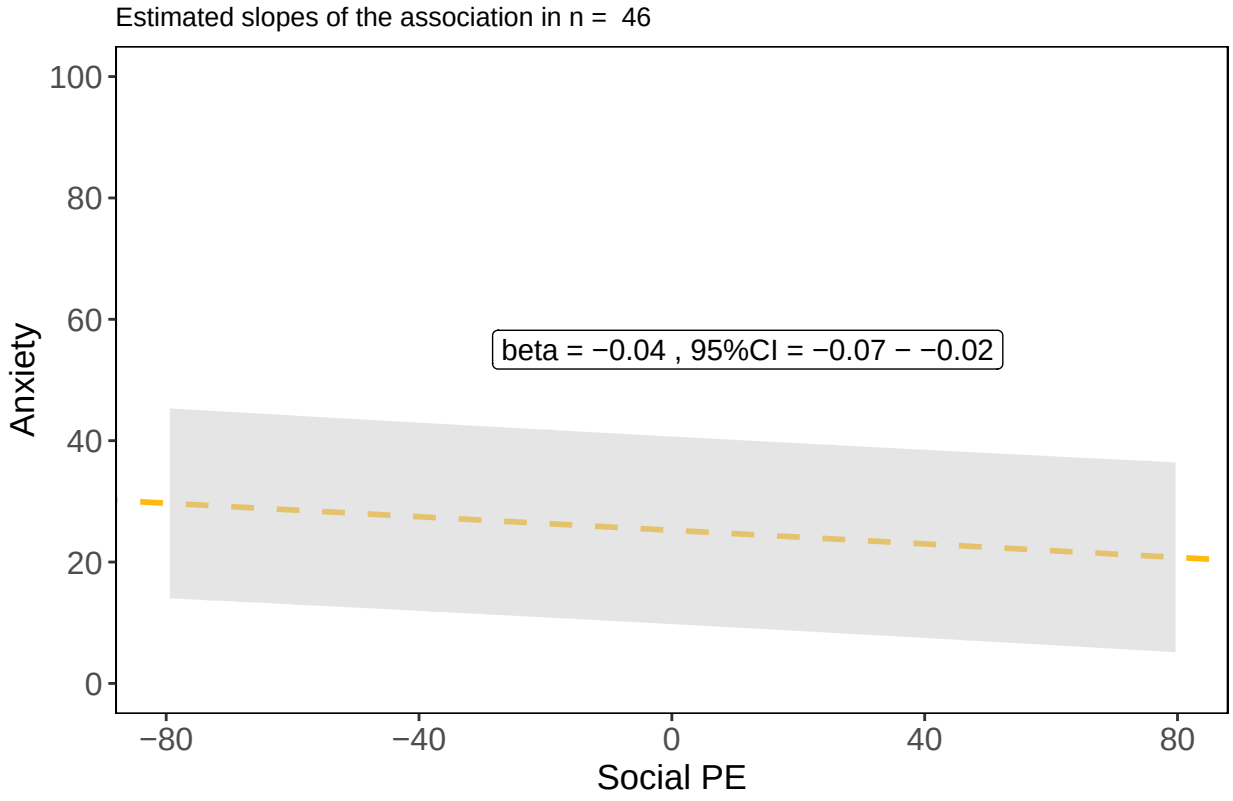
```
## [1] 18277.79
```



LME models for Anxiety and SubjPE

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

```
## [1] 17926.45
## [1] 17920.07
## [1] 17920.89
```



ICC for Mood

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.652
##   Unadjusted ICC: 0.652
```

ICC for Anxiety

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.805
##   Unadjusted ICC: 0.805
```