

# Surprise study pilot 19

Marjan Biria

2024-03-11

## Study description

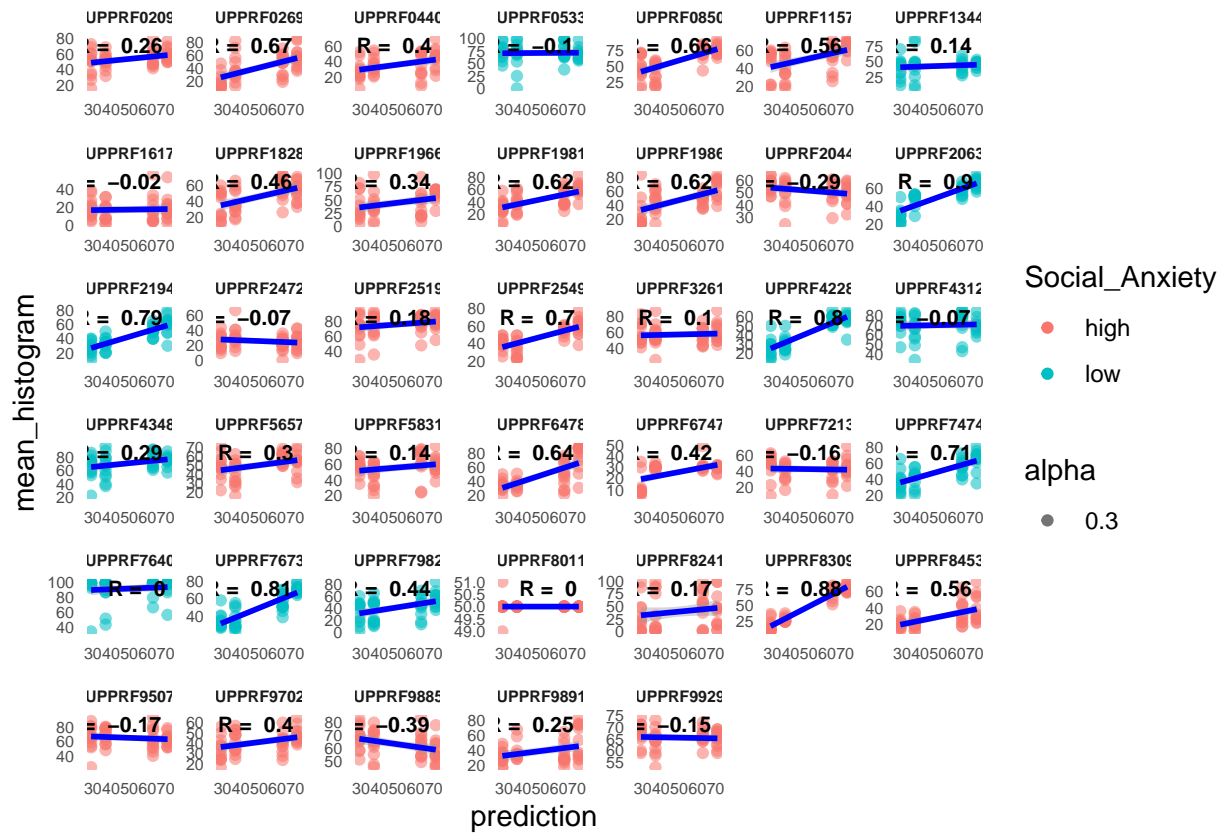
This study is the same as pilot 16, (pilots 17 and 18 had the chocking element), we only show 4 judges, show histograms only early on, and ask them how they think they will perform/did perform/ how the judge thought they performed. We have also removed the certainty rating from this version.

The Gorilla experiment is the following: <https://app.gorilla.sc/admin/project/128379> The task is the following: <https://app.gorilla.sc/admin/task/788287/editor>

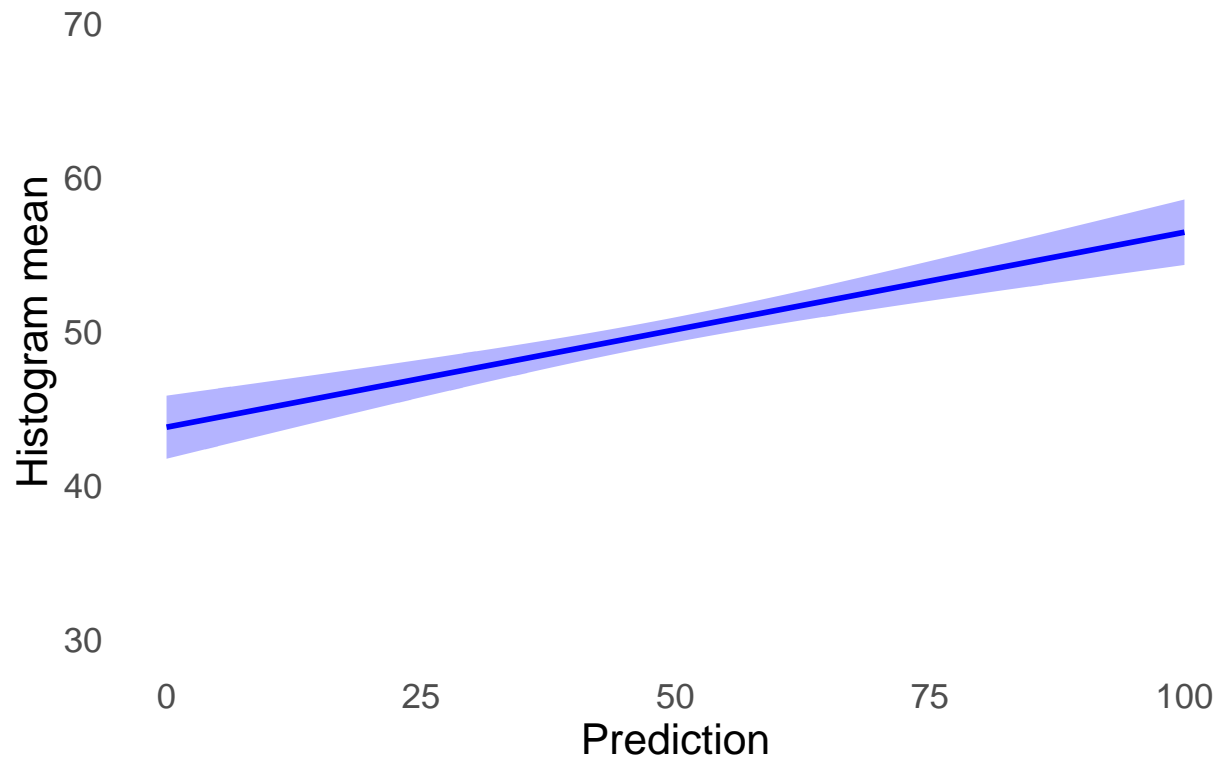
```
## # A tibble: 40 x 2
##   Random_ID Trial.Number
##   <chr>         <int>
## 1 SUPPRF02095      48
## 2 SUPPRF02691      48
## 3 SUPPRF04400      48
## 4 SUPPRF05331      48
## 5 SUPPRF08502      48
## 6 SUPPRF11577      48
## 7 SUPPRF13444      48
## 8 SUPPRF16178      48
## 9 SUPPRF18284      48
## 10 SUPPRF19668      48
## # i 30 more rows
```

## Relationship between prediction and mean histogram

## [1] "average correlation between mean\_hist and prediction: 0.319931097057782"

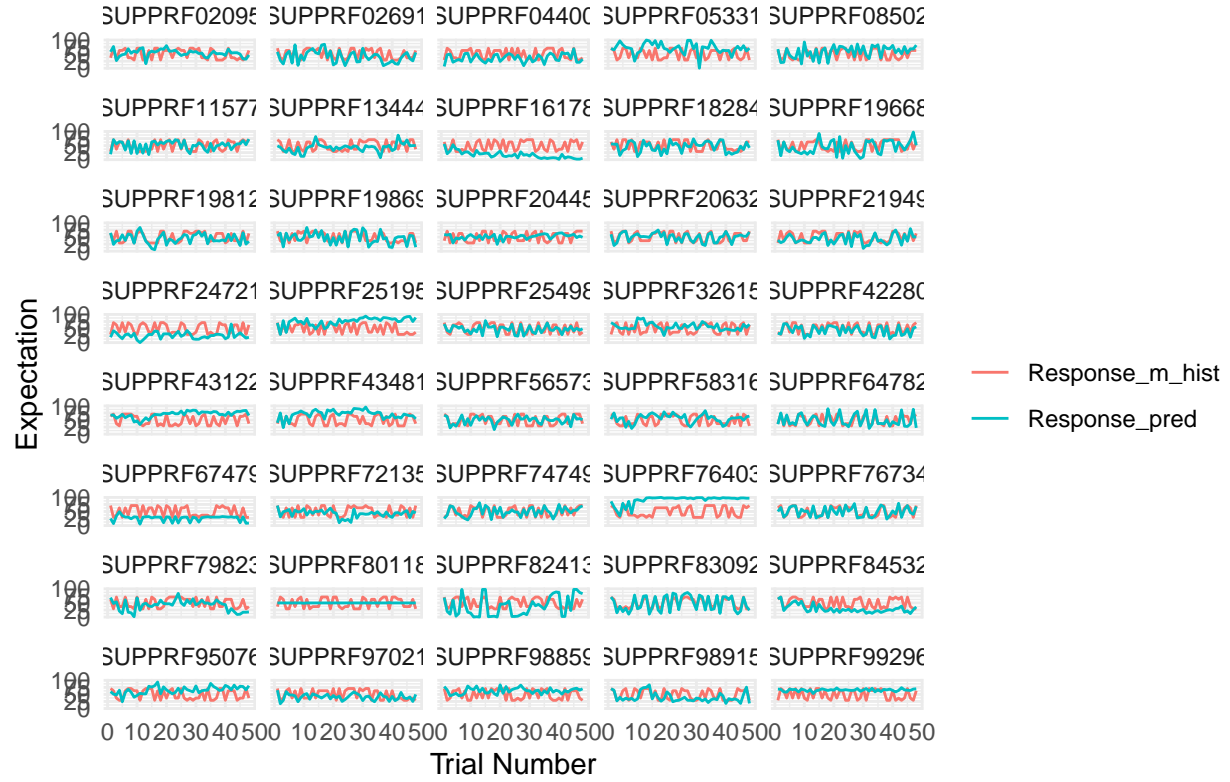


## Relationship between Expectation and Histogram



## [1] 0.3499747

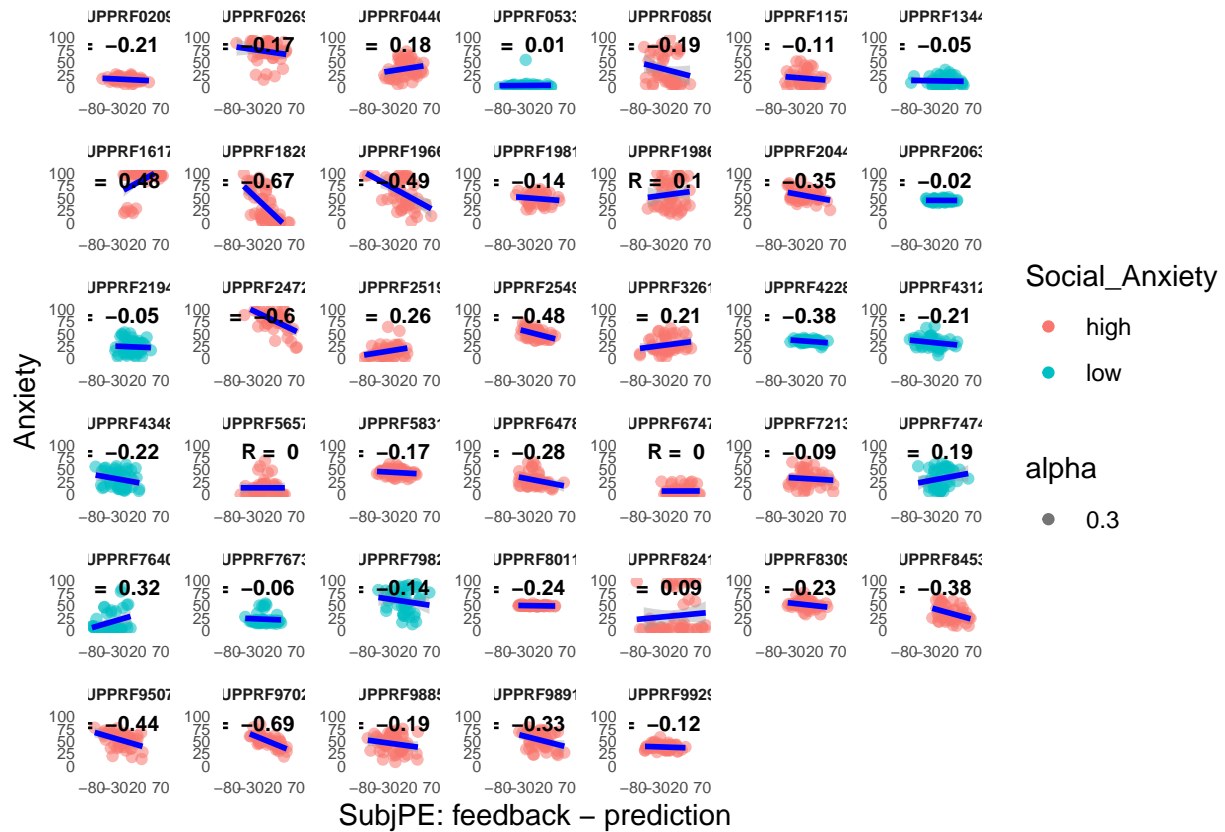
## Expectation across time



# Relationship between Anxiety and SubjPE

SubjPE = feedback - prediction (before performance)

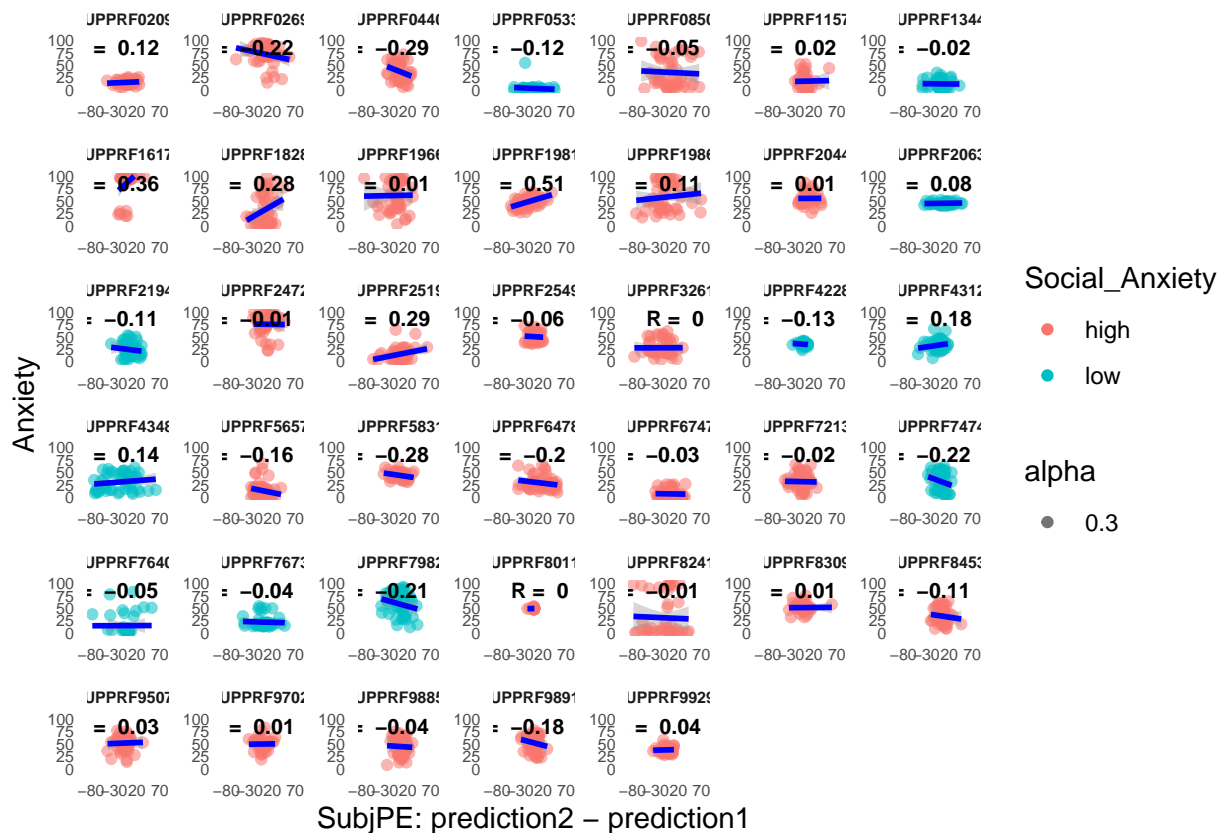
## [1] "average correlation between anxiety and SubjPE: -0.145854971406007"



## Relationship between Anxiety and SubjPE\_2

Here SubjPE\_2 was calculated by looking at the difference between the ratings on questions before and after the performance: “how well you performed?” minus “how well do you think you will perform?”.

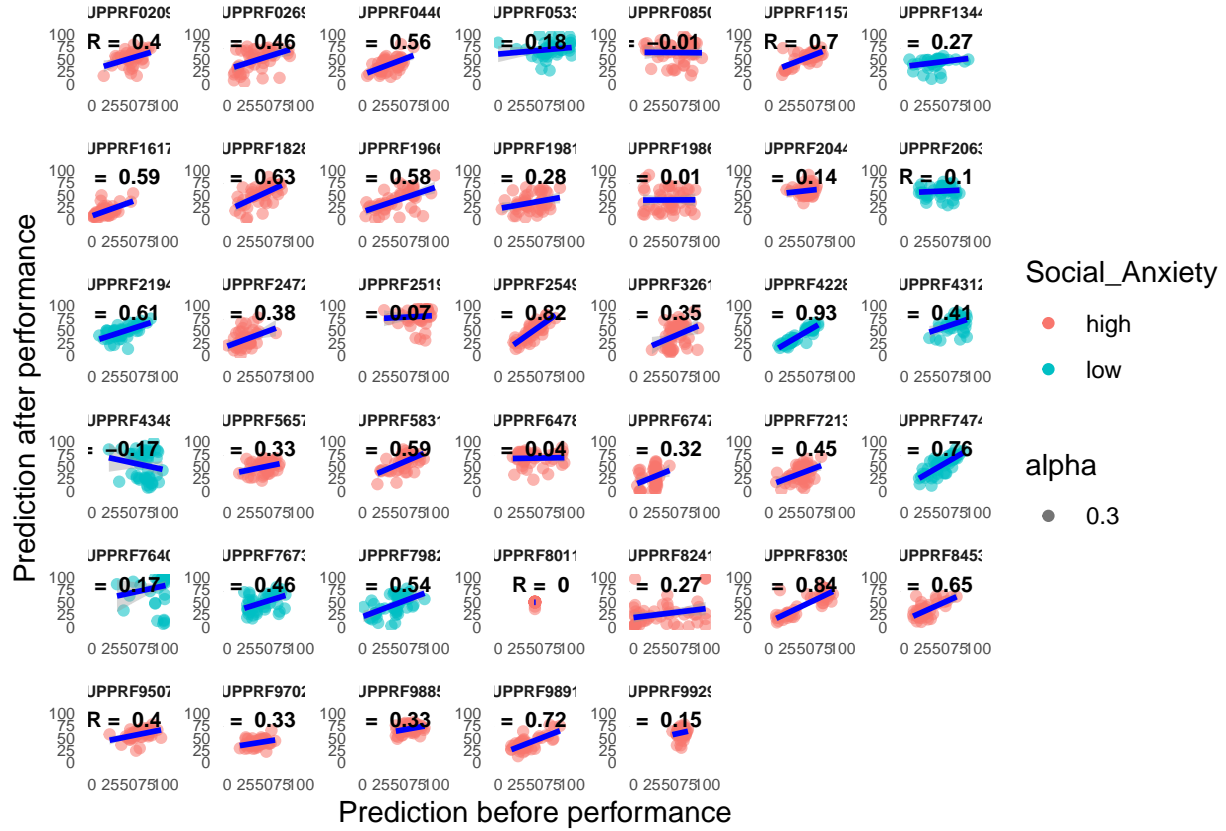
## [1] "average correlation between anxiety and SubjPE\_2: -0.00818375331983552"



## Relationship between predictions before and after performance

We will see in the following pages that the relationship between SubjPE and SubjPE3 with mood and anxiety is very similar. If the predictions before and after performance would be very similar (highly correlated), it would make sense as SubjPE is calculated as [feedback - prediction\_before\_performance] and SubjPE\_3 is calculated as [feedback - prediction\_after\_performance].

## [1] "average correlation between predictions before and after performance: 0.390275532489822"

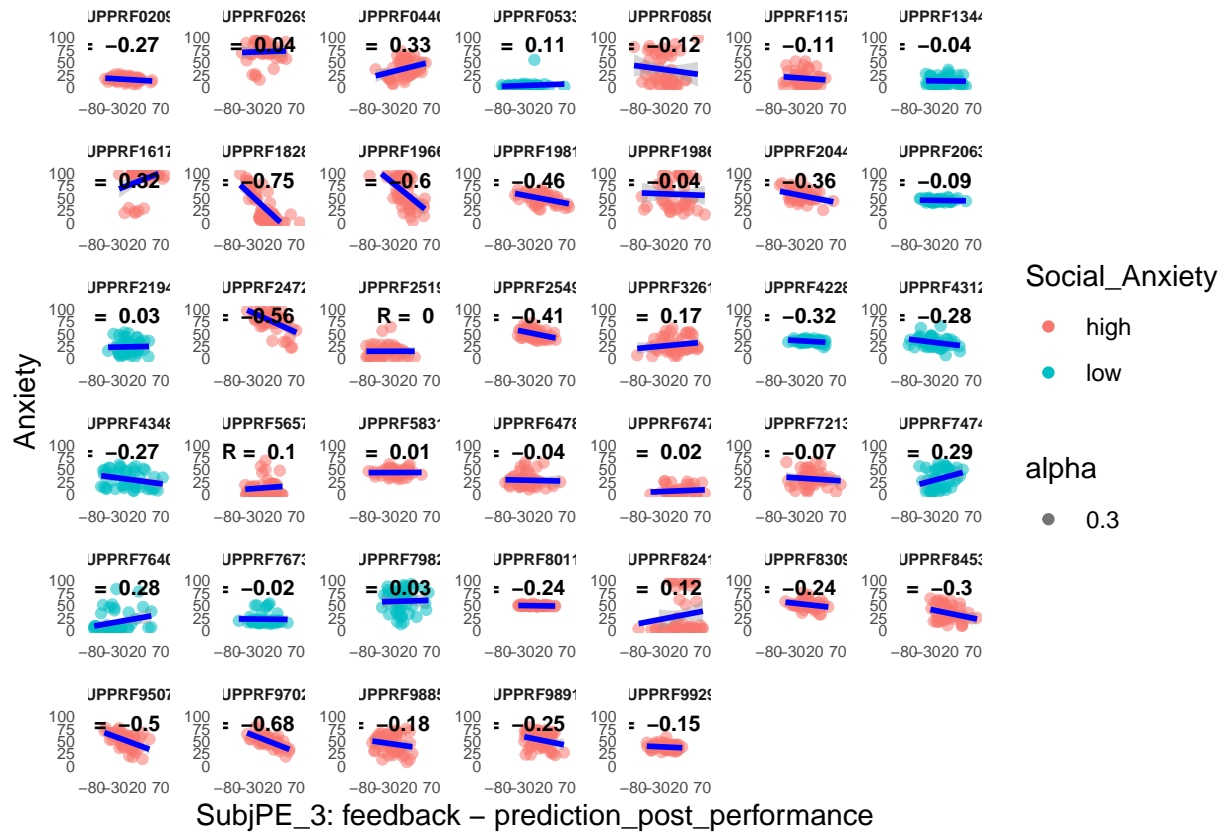




## Relationship between Anxiety and SubjPE\_3

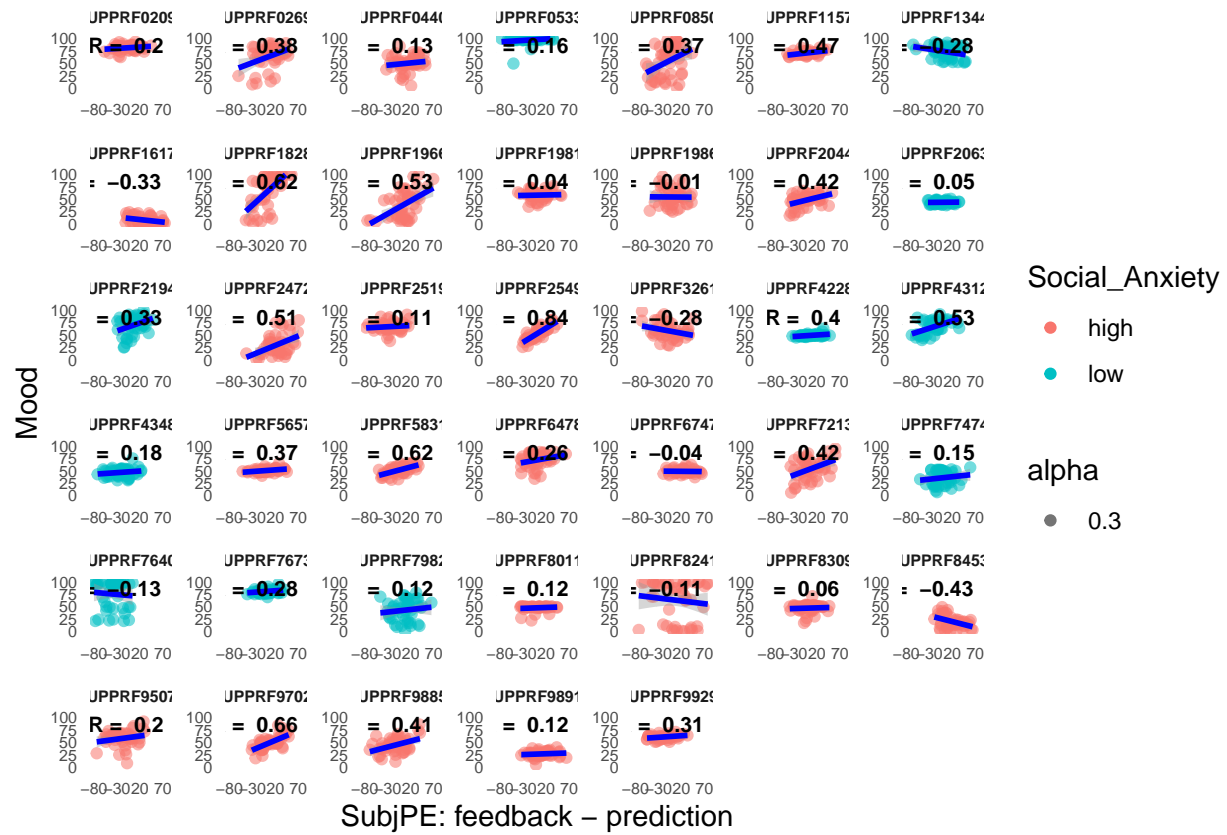
SubjPE\_3 = feedback - prediction after performance

## [1] "average correlation between anxiety and SubjPE\_3: -0.138035839002155"



# Relationship between Mood and SubjPE

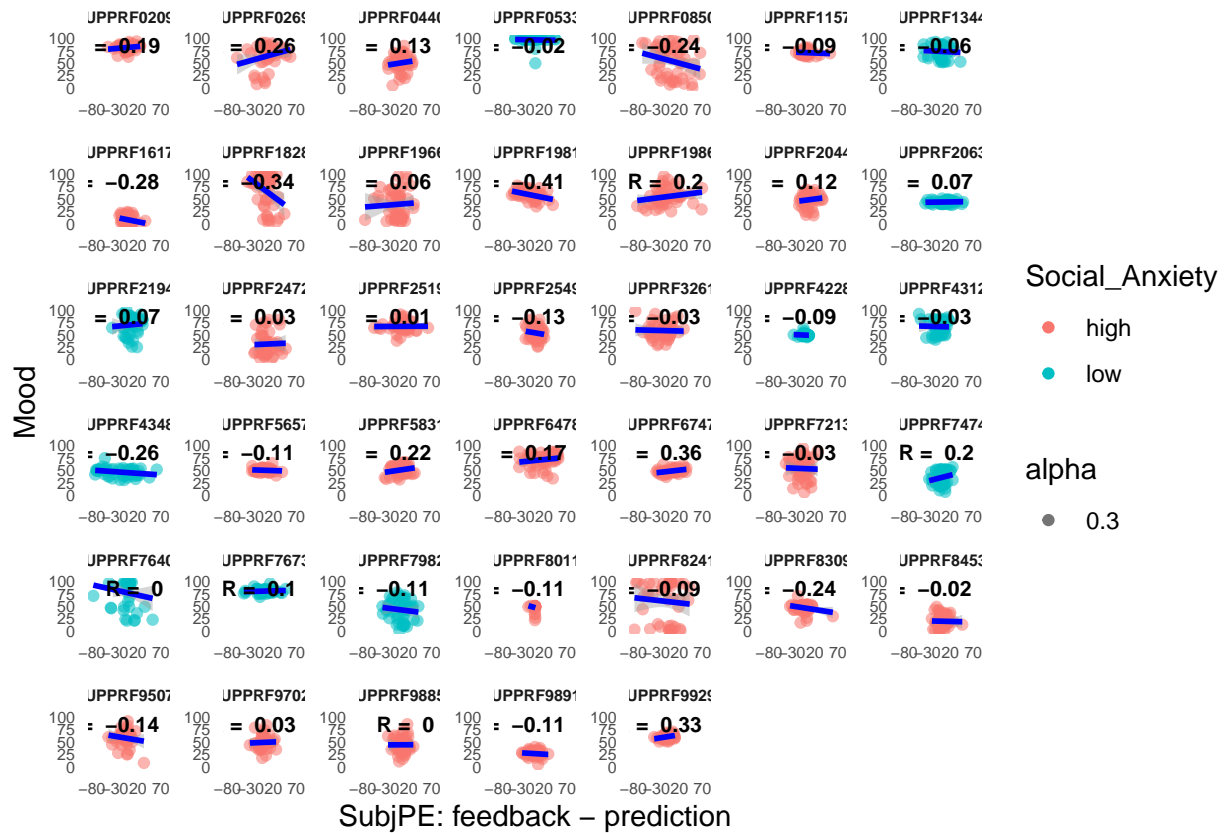
## [1] "average correlation between mood and SubjPE: 0.219500014709654"



## Relationship between Mood and SubjPE\_2

Again, here SubjPE\_2 = prediction 2 - prediction 1 (question about how they think they performed - will perform).

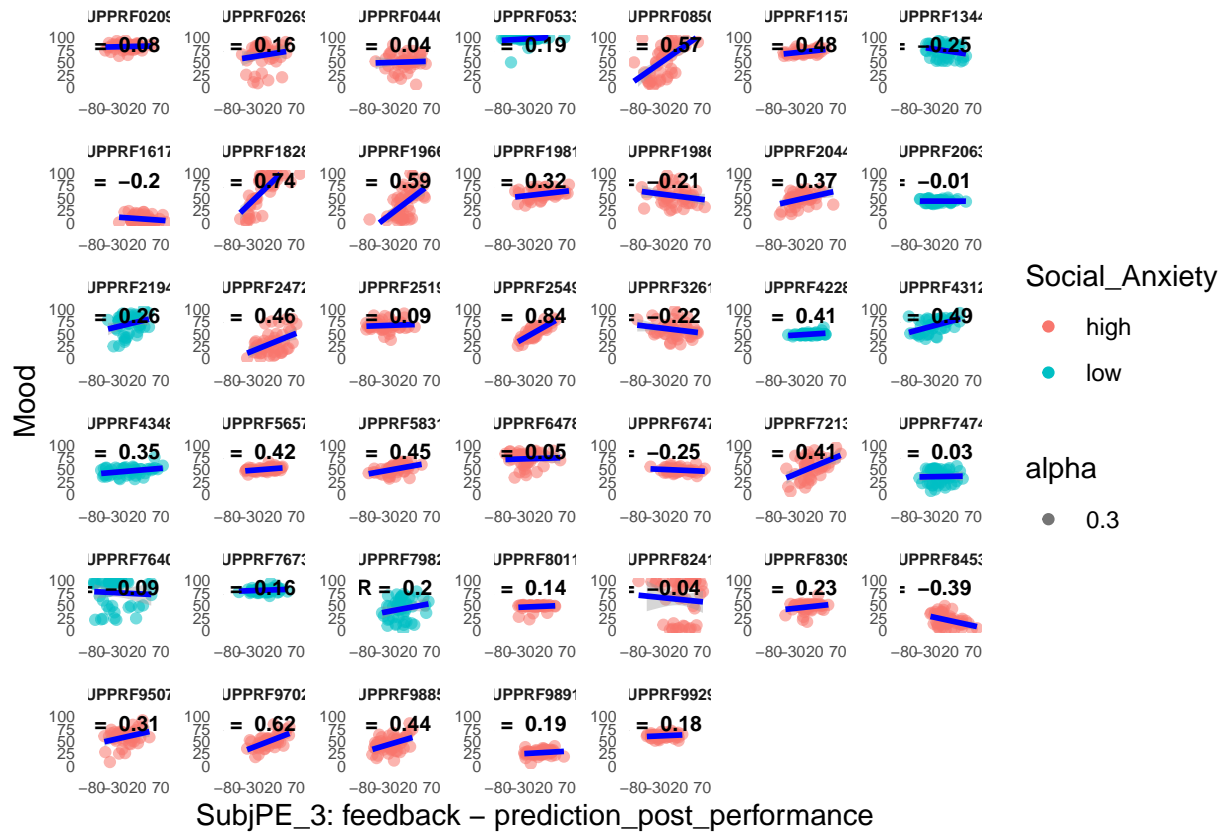
## [1] "average correlation between mood and SubjPE\_2: -0.00972840674322963"



## Relationship between Mood and SubjPE\_3

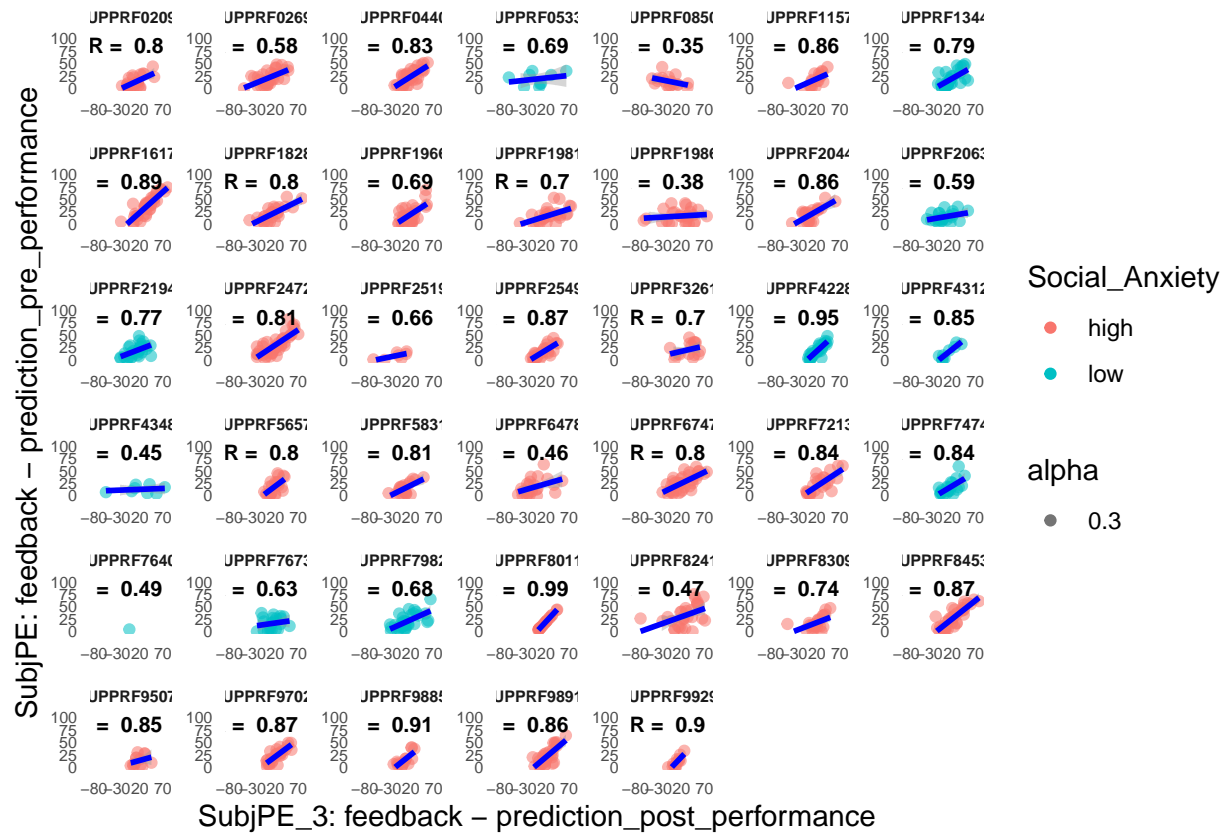
SubjPE\_3 = feedback - prediction 2 (question about how they think they performed).

## [1] "average correlation between mood and SubjPE\_3: 0.215138983251831"



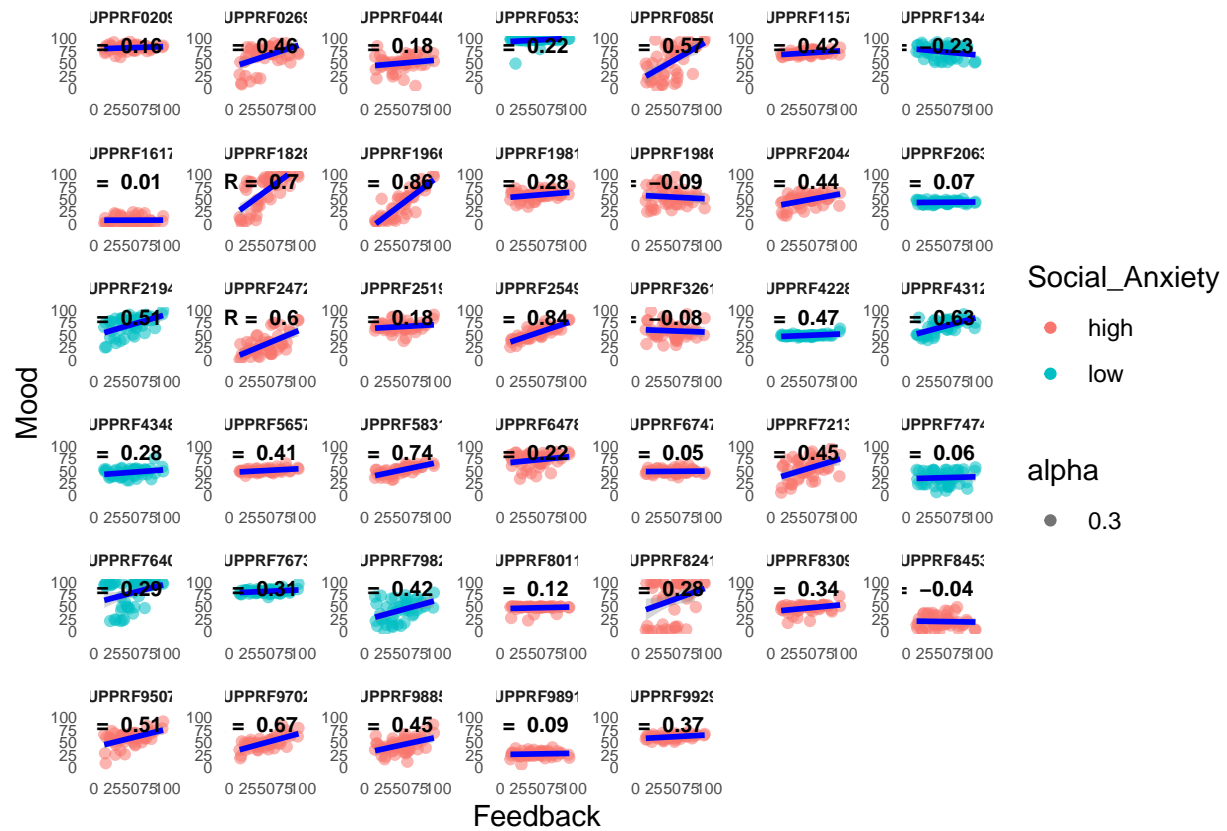
## Relationship between SubjPE and SubjPE\_3

## [1] "average correlation between mood and SubjPE\_3: 0.741927586942462"



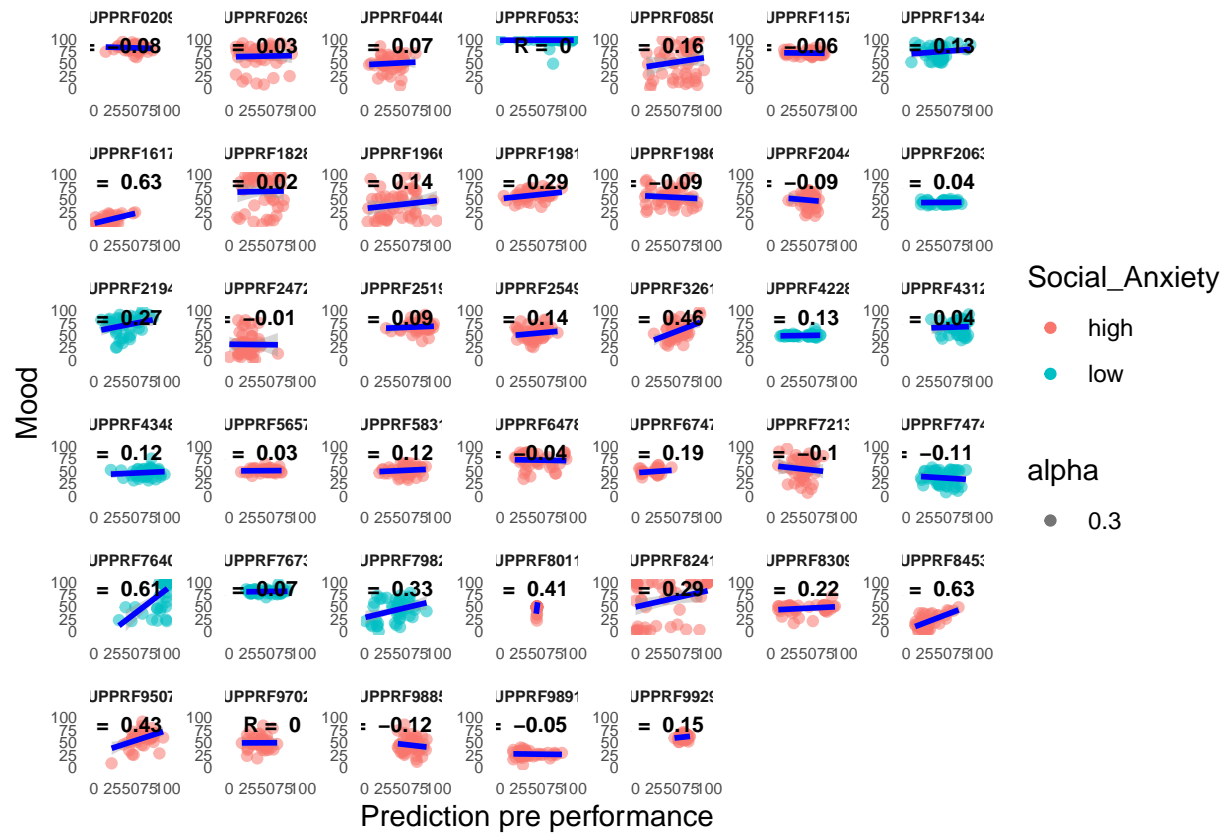
## Relationship between Mood and feedback

## [1] "average correlation between mood and feedback: 0.330933976383832"



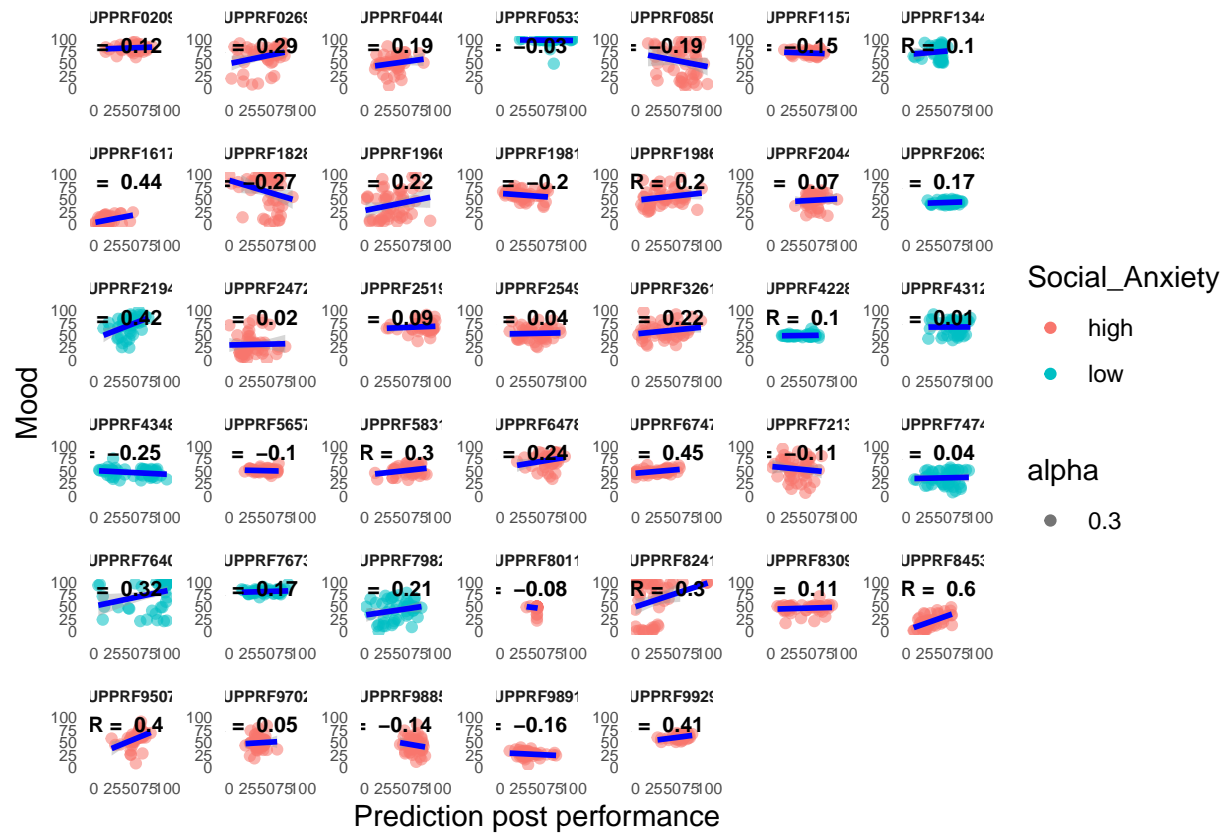
## Relationship between Mood and prediction (pre-performance)

## [1] "average correlation between mood and prediction before performance: 0.137300685536317"



## Relationship between Mood and prediction (post-performance)

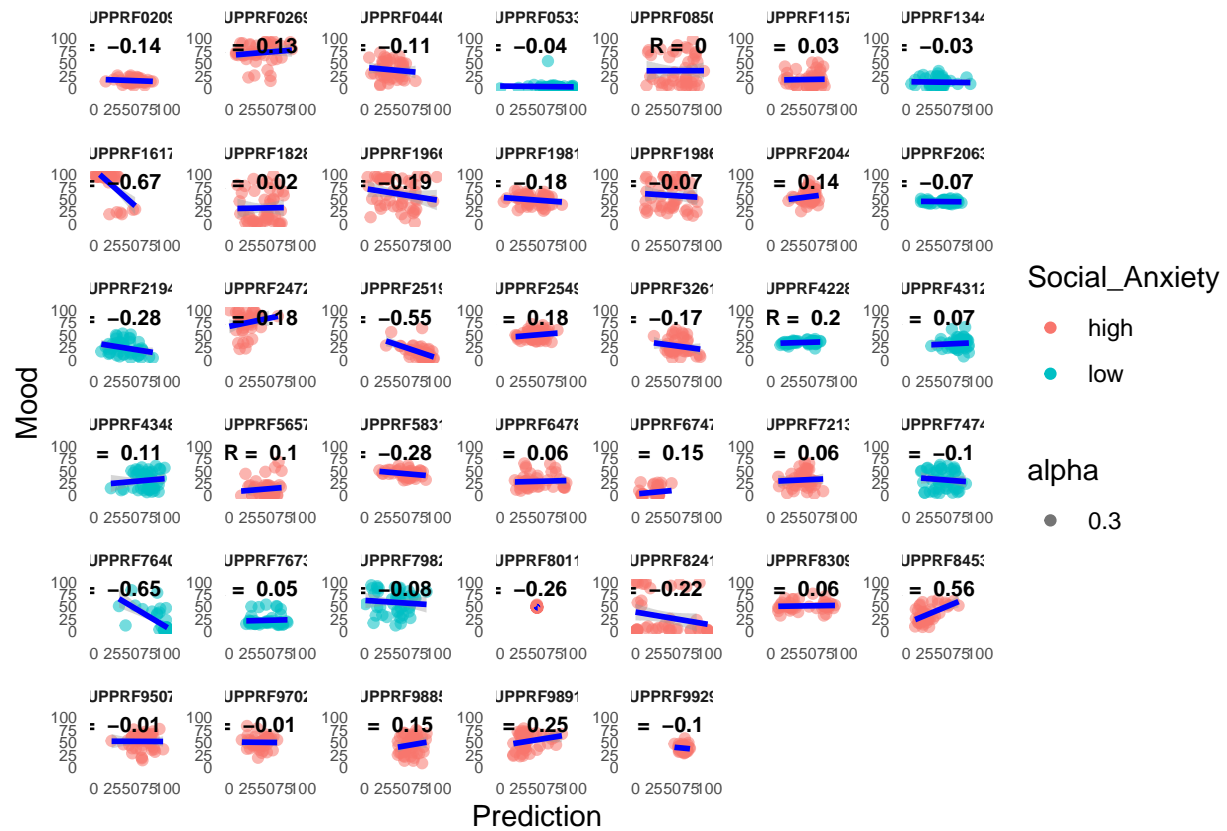
## [1] "average correlation between mood and prediction after performance: 0.115583492276789"





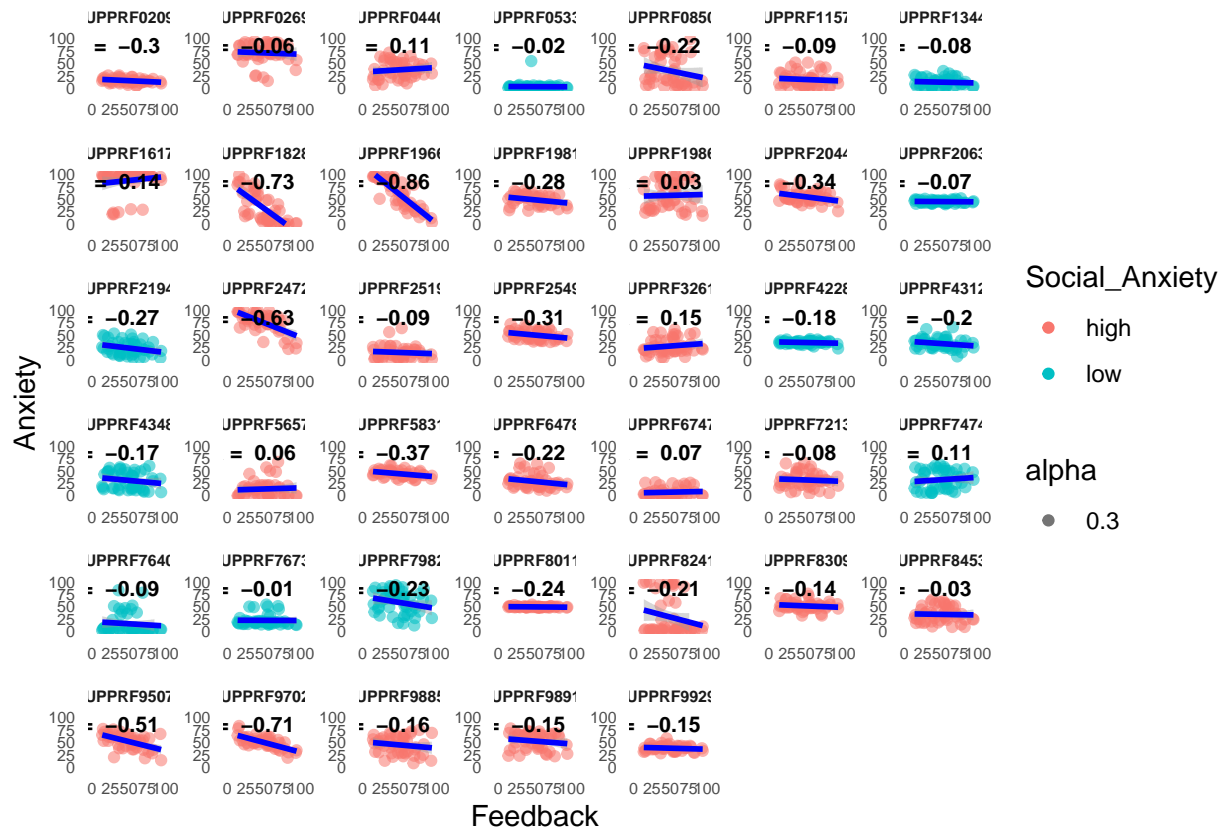
## Relationship between Anxiety and prediction

## [1] "average correlation between anxiety and prediction: -0.042753703303497"



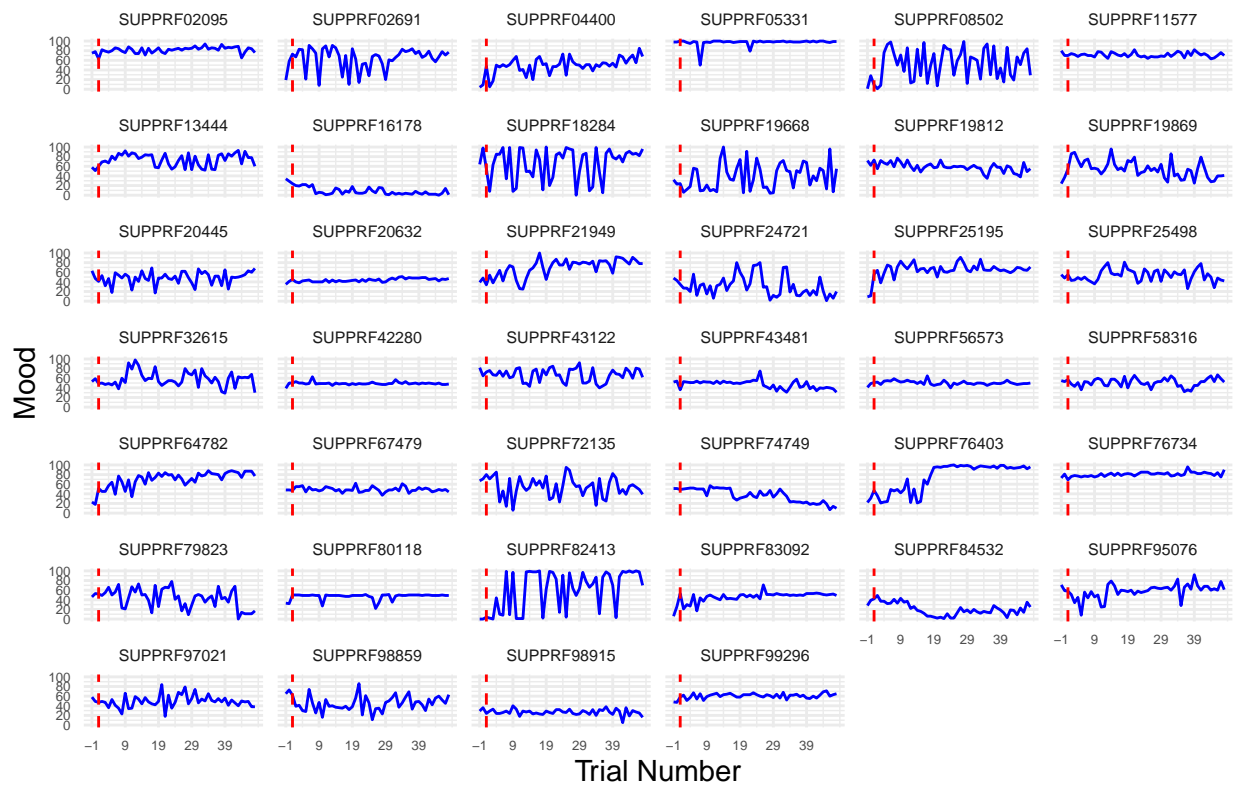
## Relationship between Anxiety and feedback

## [1] "average correlation between anxiety and feedback: -0.187801150659391"



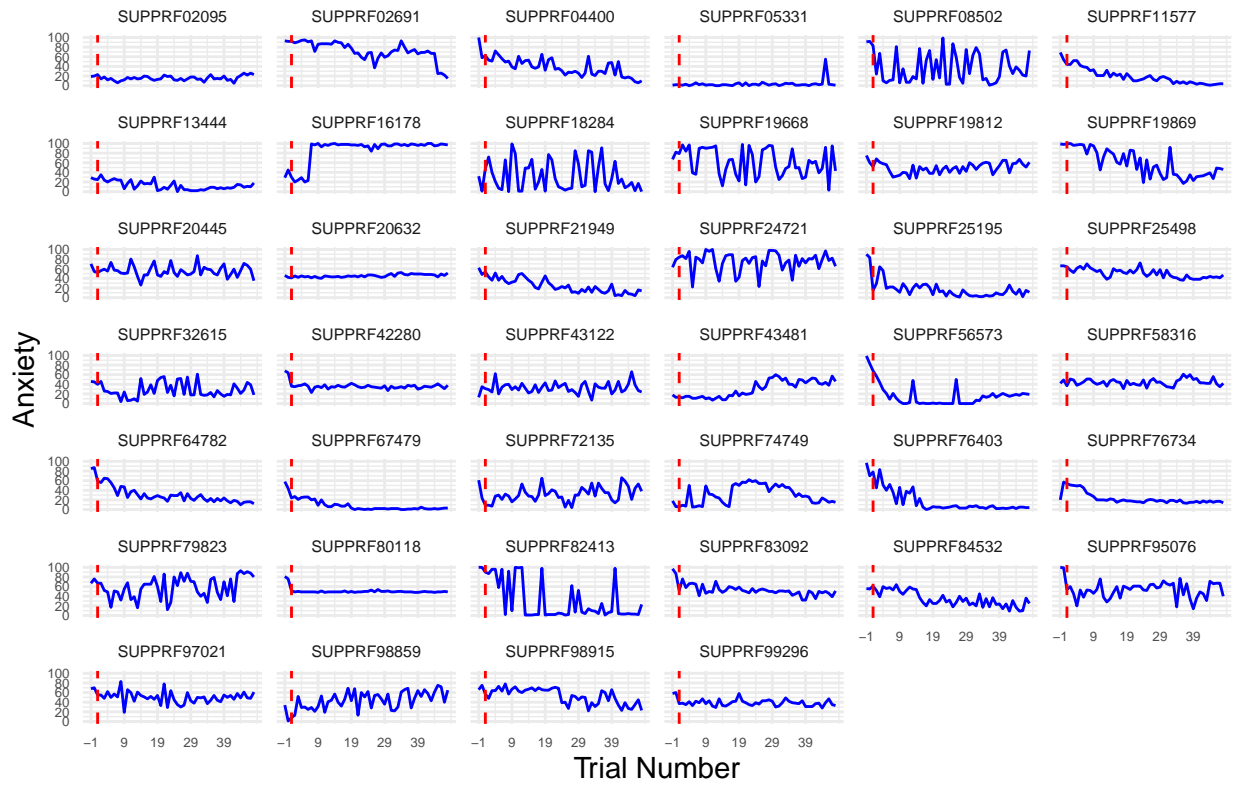
# Mood over time

## Mood across time



# Anxiety over time

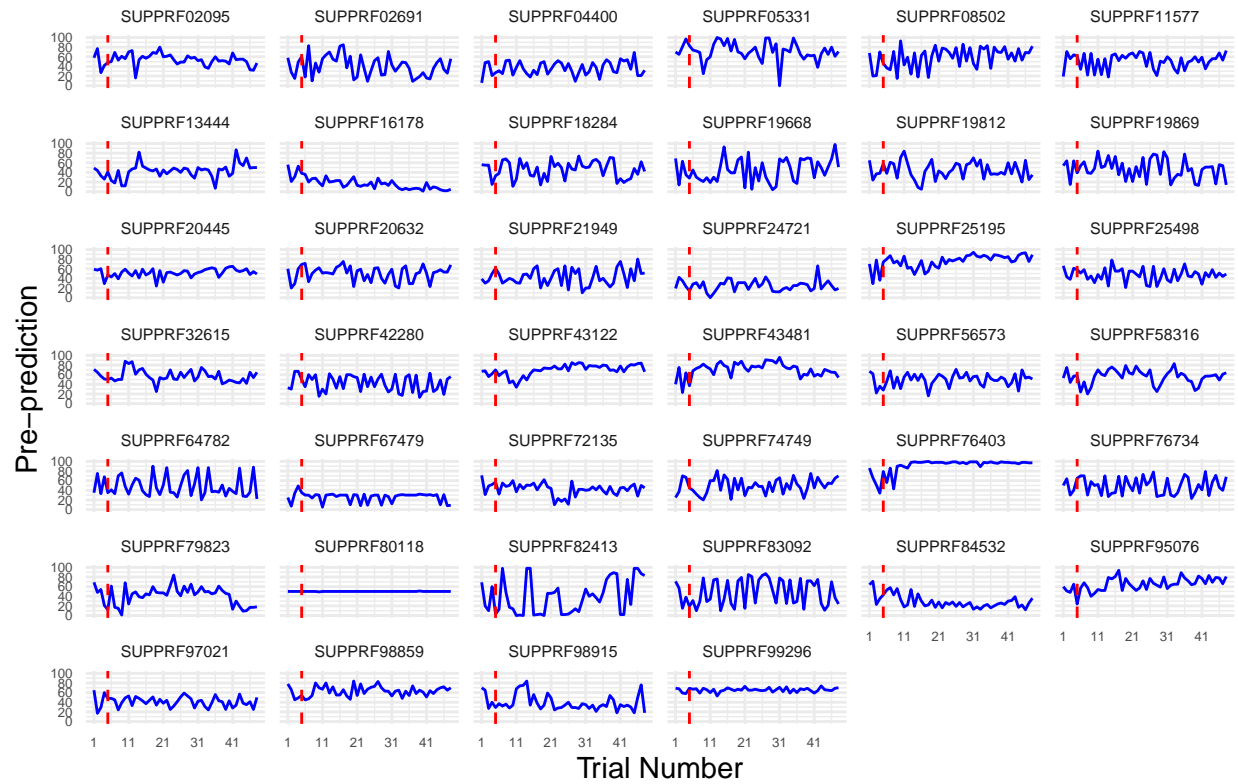
## Anxiety across time



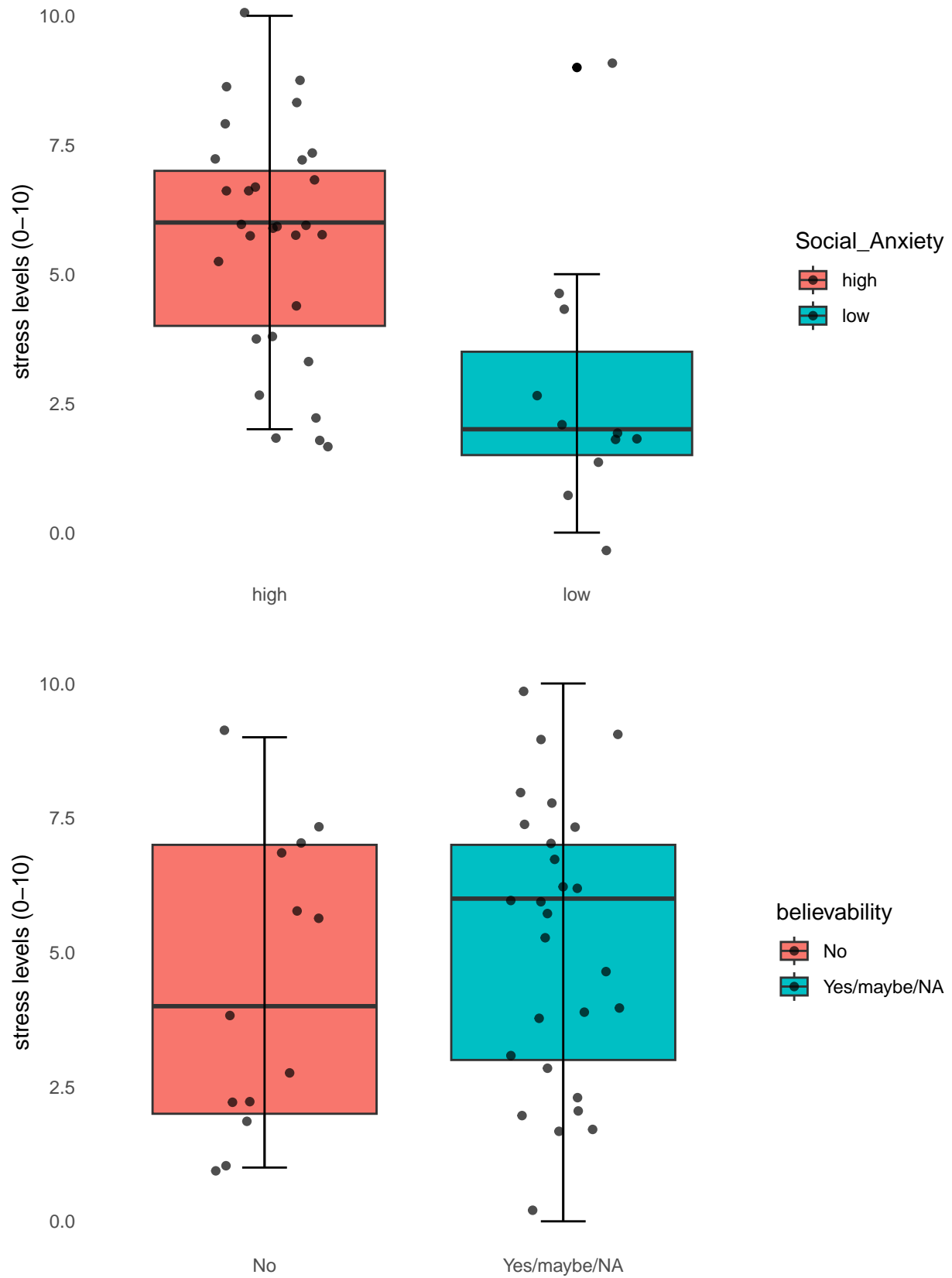
## Prediction before judgement over time

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

### Prediction before performance across time



## Stress level based on believability and social anxiety



## ICC for Mood with chocking

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.516
##     Unadjusted ICC: 0.516
```

## ICC for Anxiety with chocking

```
## # Intraclass Correlation Coefficient
##
##     Adjusted ICC: 0.540
##     Unadjusted ICC: 0.540
```