# Surprise study pilot 22

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## Study description

This study is the same as pilot 21, except we have now two new questions measuring anxiety: 1) how nervous would you feel to talk to this person again? 2) how embarrassed do you feel right now?

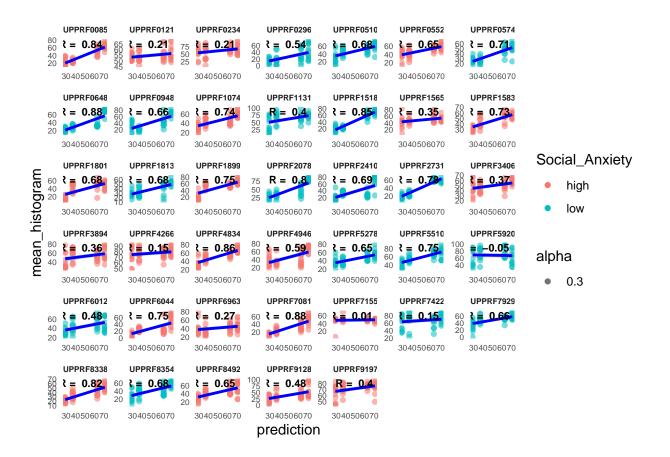
We would like to see whether these are more specific answers to tap into social anxiety (after the feedback we received from Quentin).

The Gorilla experiment is the following: https://app.gorilla.sc/admin/experiment/175580/design The task is the following: https://app.gorilla.sc/admin/task/812527/editor?version=4

##	# 1	A tibble: 40	x 2
##		Random_ID	Trial.Number
##		<chr></chr>	<int></int>
##	1	SUPPRF00852	48
##	2	SUPPRF01218	48
##	3	SUPPRF02345	48
##	4	SUPPRF02960	48
##	5	SUPPRF05105	48
##	6	SUPPRF05526	48
##	7	SUPPRF05744	48
##	8	SUPPRF06489	48
##	9	SUPPRF09487	48
##	10	SUPPRF10740	48
##	# :	i 30 more ro	ws.

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

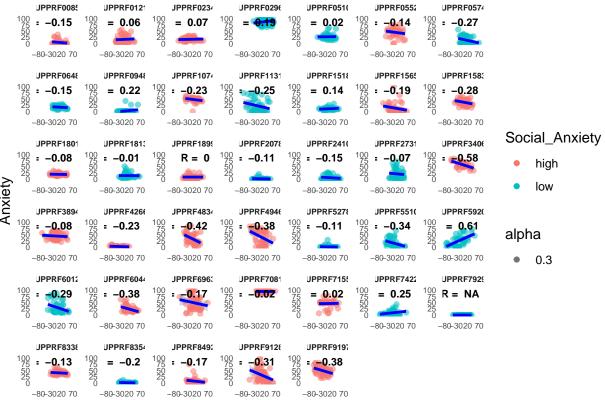
## [1] "average correlation between mean\_hist and prediction: 0.568515690909223"



## Relationship between Anxiety and SubjPE

The anxiety question now asks "how nervous would you feel to talk to this person again?". It shows a correlation of -0.12, in our previous pilot where we asked "how nervous/uncomfortable do you feel right now" we had a correlation of -0.15.

## [1] "average correlation between anxiety and SubjPE: -0.120345800998021"



SubjPE: feedback - prediction

#### # Relationship between Embarrassment and SubjPE

We asked people one additional question that was more specifically related to their social anxiety: "how embarrassed do you feel right now?". The correlation is similar to the previous question (r = -0.12).

## [1] "average correlation between embarrassment and SubjPE: -0.121277223333563"

	JPPRF0085	UPPRF0121	JPPRF0234	JPPRF0296	JPPRF0510	JPPRF0552	JPPRF0574	
	100 75 50 25 0	100 75 50 25 0		100 75 50 25 0	100 75 50 25 0	100 75 50 25 0	100 = <b>-0.27</b> 50 25 0	
	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	
	JPPRF0648	UPPRF0948	JPPRF1074	JPPRF1131	UPPRF1518	JPPRF156	UPPRF1583	
	<sup>100</sup> / <sub>75</sub> : <b>-0.15</b> <sup>50</sup> / <sub>25</sub>	100 75 50 25 0	100 75 50 25 0	100 75 50 25	100 75 = <b>0.14</b> 50 25	<sup>100</sup> / <sub>75</sub> = <b>-0.19</b> <sup>50</sup> / <sub>25</sub>	<sup>100</sup> / <sub>75</sub> = <b>-0.28</b> <sup>50</sup> / <sub>25</sub>	
	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	-80-3020 70	
	JPPRF1801	UPPRF181;	JPPRF1899	JPPRF2078	UPPRF241(	JPPRF2731	UPPRF340€	Social_Anxiety
'n	$^{100}_{75}$ : <b>-0.08</b>	$^{100}_{75} = -0.01$	$^{100}_{75}$ <b>R = 0</b>	<sup>100</sup> <sub>75</sub> = <b>-0.11</b>	<sup>100</sup> <sub>75</sub> = <b>-0.15</b>	$^{100}_{75}$ : <b>-0.07</b>	<sup>100</sup> <sub>75</sub> = <b>-0.58</b>	<ul><li>high</li></ul>
шe	<sup>100</sup> / <sub>75</sub> : -0.08 <sup>50</sup> / <sub>25</sub>	<sup>100</sup> / <sub>75</sub> = <b>-0.01</b> <sup>50</sup> / <sub>25</sub>	100 75 8 <b>R = 0</b> 50 25 0	100 75 = <b>-0.11</b> 50 25	100 75 = <b>-0.15</b> 50 25	<sup>100</sup> / <sub>75</sub> = <b>-0.07</b> <sup>50</sup> / <sub>25</sub>	100 75 50 25 0	Tilgit
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<u> </u>								
=	JPPRF3894	JPPRF4266	JPPRF4834	JPPRF4946	JPPRF5278	JPPRF551(	JPPRF5920	
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≣mbar		100						alpha
Embarrassment	100			100 -	100	100	100	alpha  • 0.3
Embar	100 75 50 25 0	<sup>100</sup> / <sub>75</sub> = <b>-0.23</b> <sup>50</sup> <sup>25</sup> 0	100 75 50 25 0	100 75 50 25 0	100 75 = <b>-0.11</b> 50 25	100 75 : <b>-0.34</b> 50 25 0	100 75 50 25 0	
Embar	100 75 50 25 -80-3020 70	100 75 50 25 -80-3020 70	100 75 50 50 -80-3020 70 JPPRF696:	100 75 50 25 -80-3020 70 UPPRF7081	100 75 25 25 -80-3020 70	100 75 50 25 0 -80-3020 70	100 75 50 -80-3020 70	
Embar	100 75 50 25 0 -80-3020 70 JPPRF6012	100 75 = -0.23 50 25 0 -80-3020 70	100 75 50 50 -80-3020 70 JPPRF696:	100 75 50 25 0 -80-3020 70	100 75 = <b>-0.11</b> 50 25 -80-3020 70	100 75 = <b>-0.34</b> 50 25 0 -80-3020 70	100 75 50 25 0 -80-3020 70	
Embar	100 75 50 25 -80-3020 70	100 75 50 25 -80-3020 70	100 75 50 50 -80-3020 70 JPPRF696:	100 75 50 25 -80-3020 70 UPPRF7081	100 75 25 25 -80-3020 70	100 75 50 25 0 -80-3020 70	100 75 50 -80-3020 70	
Embar	100 75 25 -80-3020 70 UPPRF6012 100 75 25 0	100 25 -80-3020 70 UPPRF6044 100 75 25 0	100 755 25 -80-3020 70 JPPRF696: 100 755 25 0	100 75 25 -80-3020 70 UPPRF7081 100 75 25 0	100 750 250 -80-3020 70 UPPRF715! 100 750 250 250	100 25 -80-3020 70 UPPRF742: 100 75 75 25 0	100 75 25 -80-3020 70 UPPRF7921 100 75 50 25 0	
Embar	100 750 25 -80-3020 70 JPPRF6012 100 25 -80-3020 70 JPPRF8338	100 25 -80-3020 70 UPPRF604 100 25 -80-3020 70 UPPRF8354	100 = -0.42 25 = -0.42 25 = -80-3020 70 JPPRF696: 100 = -0.17 50 = -0.17 50 = -80-3020 70 JPPRF849:	100 = 0.38 -80-3020 70 JPPRF7081 100 = -0.02 50 = -0.02 -80-3020 70 JPPRF9128	100 = -0.11 25 = -0.11 -80-3020 70 UPPRF715! 100 = 0.02 50 -80-3020 70 UPPRF919;	100 25 -80-3020 70 UPPRF742: 100 75 75 25 0	100 75 25 -80-3020 70 UPPRF7921 100 75 50 25 0	
Embar	100 -80-3020 70 JPPRF6012 100 -80-3020 70 -80-3020 70 -80-3020 70 JPPRF8338	100 25 -80-3020 70 UPPRF6044 100 25 25 -80-3020 70 -80-3020 70 UPPRF8354	100 = -0.42 25	100 = -0.02 -80-3020 70 UPPRF7081 100 = -0.02 50 -80-3020 70 -80-3020 70 UPPRF9128	100 -80-3020 70 UPPRF715! 100 -80-3020 70 UPPRF919;	100 25 -80-3020 70 UPPRF742: 100 75 75 25 0	100 75 25 -80-3020 70 UPPRF7921 100 75 50 25 0	

SubjPE: feedback - prediction

# Relationship between Mood and SubjPE

## [1] "average correlation between mood and SubjPE: 0.303707873256331"

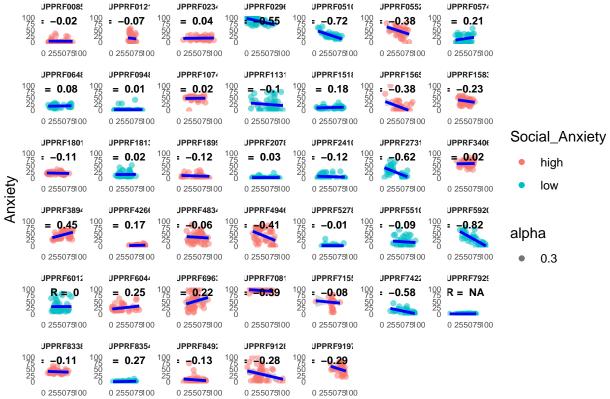
		JPPRF0085		UPPRF0121		PPRF0234		JPPRF0296		UPPRF051(		JPPRF0552		JPPRF0574		
	100 75 50 25 0	= 0.36	100 75 50 25 0	= 0.59	100 75 50 25 0	= 0.32	100 75 50 25 0	= -0.28	100 75 50 25 0	R=0	100 75 50 25 0	= 0.42	100 75 50 25 0	= 0.64		
		-80-3020 70		80-3020 70		30-3020 70		-80-3020 70		-80-3020 70		-80-3020 70		-80-3020 70		
		JPPRF0648		UPPRF0948		IPPRF1074		JPPRF1131		JPPRF1518		JPPRF156		UPPRF158		
	100	= 0.01		= 0.34		= 0.23	100 75	= 0.29		= <b>0.42</b>	100	= 0.37	100	= 0.13		
	100 75 50 25 0		100 75 50 25 0		100 75 50 25 0		100 75 50 25 0	0000	100 75 50 25 0	<b>~</b>	100 75 50 25		100 75 50 25 0			
		-80-3020 70		80-3020 70	-8	80-3020 70	-	-80-3020 70	-	-80-3020 70		-80-3020 70	-	-80-3020 70	_	
		JPPRF1801		UPPRF181:		IPPRF1899		JPPRF2078		JPPRF241(		JPPRF2731		UPPRF340€	Soc	cial_Anxiety
	100 75 50 25	= -0.04	100 75 50 25	= 0.77	100 75 50 25 0	= 0.27	100 75 50 25	= <b>0.6</b> 6	100 75 50 25	= -0.15	100 75 50 25	= 0.48	100 75 50 25	= 0.64	•	high
σ		-80-3020 70	-	80-3020 70		80-3020 70	-	-80-3020 70	-	-80-3020 70		-80-3020 70		-80-3020 70	•	low
Mood		-00-3020 70		00-3020 70	-0	0-3020 70		-00-3020 70		-00-3020 70		-00-3020 70		-00-3020 70		
		IDDDECOO		IDDDE 4004		DDDE 400		IDDDE 4044		IDDD EFOR		IDDD EEEA		IDDDEEOO		
2	100	JPPRF389 <sup>2</sup> = <b>0.07</b>		UPPRF426€ <b>=-0:21</b>		PPRF4834 = <b>0.72</b>		JPPRF4946 = <b>0.56</b>		JPPRF5278 = <b>0.72</b>	100	$ JPPRF5510 \\ = 0.63 $	100	UPPRF592(		
2	100 75 50 25	JPPRF389 <sup>2</sup> = <b>0.07</b>		UPPRF4266 =-0-21		= 0.72		JPPRF4946 = <b>0.56</b>		UPPRF5278 = <b>0.72</b>	100 75 50 25	UPPRF5510 = <b>0.63</b>	100 75 50 25	UPPRF592( = -0.44	alph	na
2	100 75 50 25 0		100 75 50 25 0		100 75 50 25 0		100 75 50 25 0		100 75 50 25 0		100 75 50 25 0		100 75 50 25 0		alph	na 0.3
2		= 0.07	100 75 50 25 0	<b>=-0.</b> 21	100 75 50 25 0	= 0.72	100 75 50 25 0	= 0.56	100 75 50 25 0	= 0.72		= 0.63		= -0.44	alph •	
2		<b>= 0.07</b> -80-3020 70	100 75 50 25 0	<b>=-0.21</b> 80-3020 70	100 75 50 25 0	<b>= 0.72</b> 30-3020 70	100 75 50 25 0	= <b>0.56</b> -80-3020 70	100 75 50 25 0	= <b>0.72</b> -80-3020 70		= <b>0.63</b> -80-3020 70		<b>-0.44</b> -80-3020 70	alph •	
2	100 75 50 25 0	= 0.07 -80-3020 70 UPPRF6012 = 0.45	100 75 50 25 0 - 100 75 50 25 0	=0.21 80-3020 70 UPPRF6044 = -0.32	100 75 50 25 0 -8 100 75 50 25 0	= 0.72 30-3020 70 3PPRF696: = 0.48	100 75 50 25 0 100 75 50 25 0	= 0.56 -80-3020 70 UPPRF7081 = 0.01	100 755 50 25 0 100 75 50 25 0	= 0.72 -80-3020 70 UPPRF715! = 0.14	100 75 50 25 0	= 0.63 -80-3020 70 UPPRF7421 : -0.19	100 75 50 25 0	-80-3020 70 UPPRF792\$ = 0.28	alph •	
2	100 75 50 25 0	= 0.07 -80-3020 70 <b>JPPRF601:</b> = 0.45 -80-3020 70	100 75 50 25 0 - 100 75 50 25 0 -	=0.21 80-3020 70 UPPRF6044 = -0.32 80-3020 70	100 75 50 25 0 -8 100 75 50 0 -8	= 0.72 30-3020 70 3PPRF696: = 0.48 30-3020 70	100 75 50 25 0 100 75 50 25 0	= 0.56 -80-3020 70 UPPRF7081 = 0.01 -80-3020 70	100 75 50 25 0 100 75 50 25 0	= <b>0.72</b> -80-3020 70  UPPRF715! = <b>0.14</b> -80-3020 70	100 75 50 25 0	= <b>0.63</b> -80-3020 70 <b>UPPRF742</b> 2	100 75 50 25 0	-80-3020 70 UPPRF7929	alph •	
2	100 75 50 25 0	= 0.07 -80-3020 70 <b>JPPRF6012</b> = 0.45 -80-3020 70 <b>JPPRF8338</b>	100 755 500 255 0 100 755 550 255 0	80-3020 70  UPPRF6044 = -0.32  80-3020 70  UPPRF8354	100 : : 550	= 0.72 30-3020 70 30-3020 70 40-3020 70 40-3020 70	100 75 50 25 0 100 75 50 25 0	= 0.56 -80-3020 70 UPPRF7081 = 0.01 -80-3020 70 UPPRF9128	100 7550 250 0 100 755 525 0	= 0.72 -80-3020 70 UPPRF715! = 0.14 -80-3020 70 UPPRF9197	100 75 50 25 0	= 0.63 -80-3020 70 UPPRF7421 : -0.19	100 75 50 25 0	-80-3020 70 UPPRF792\$ = 0.28	alph •	
2	100 75 50 25 0	= 0.07 -80-3020 70 <b>JPPRF6012</b> = 0.45 -80-3020 70 <b>JPPRF8338</b>	100 75 50 25 0 - 100 75 50 25 0 -	=0.21 80-3020 70 UPPRF6044 = -0.32 80-3020 70	100 75 50 25 0 -8 100 75 25 0 -8	= 0.72 30-3020 70 3PPRF696: = 0.48 30-3020 70	100 75 50 25 0 100 75 50 25 0	= 0.56 -80-3020 70 UPPRF7081 = 0.01 -80-3020 70	100 75 50 25 0 100 75 50 25 0	= 0.72 -80-3020 70 UPPRF715! = 0.14 -80-3020 70 UPPRF9197	100 75 50 25 0	= 0.63 -80-3020 70 UPPRF7421 : -0.19	100 75 50 25 0	-80-3020 70 UPPRF792\$ = 0.28	alph •	

SubjPE: feedback - prediction

#### # Relationship between Anxiety and prediction

The correlation between "how nervous would you feel to talk to this person again" and prediction is bigger than the one with SubjPE (-0.14 vs -0.11), with our previous question in pilot 21 it was the other way around, and we had a correlation of almost -0.15.

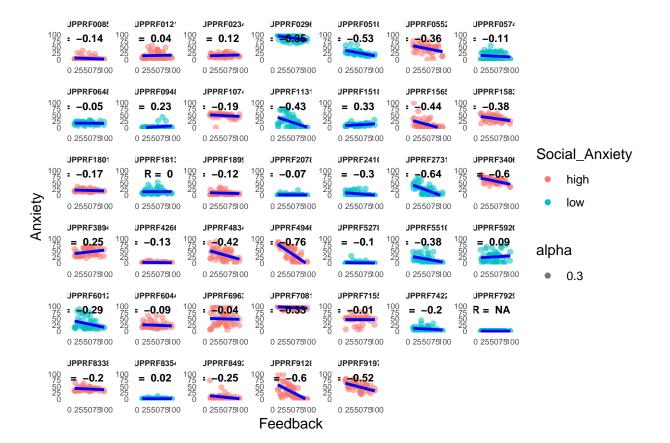
## [1] "average correlation between anxiety and prediction: -0.120705627009434"



## Relationship between Anxiety and feedback

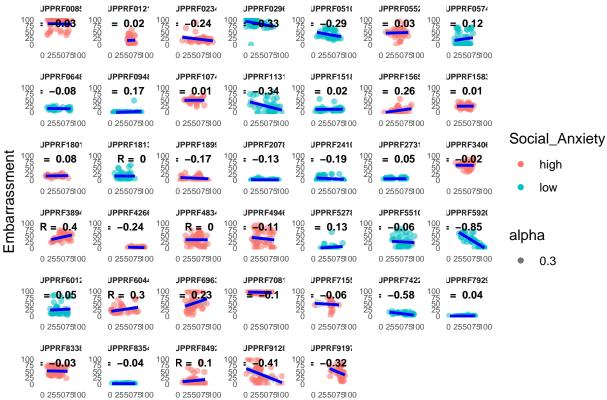
Again, the relationship between "how nervous would you feel to talk to this person again" and feedback is stronger than what we had before (-0.21, vs -0.17).

## [1] "average correlation between anxiety and feedback: -0.207934266916119"



# Relationship between Embarrassment and prediction A much weaker correlation with embarrassment and prediction (r = -0.06).

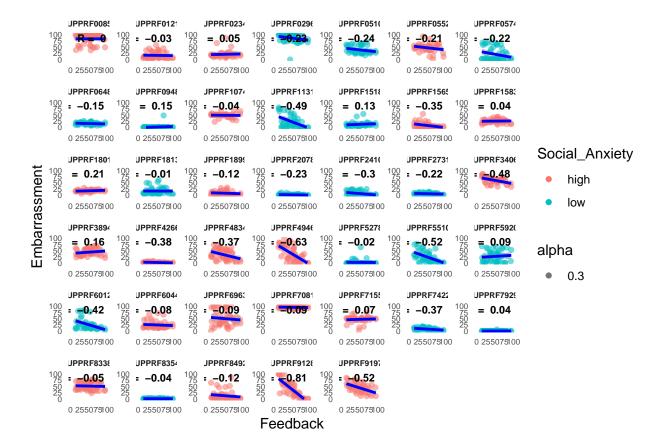
## [1] "average correlation between Embarrassment and Prediction: -0.0651567595928297"



Pre performance prediction

# Relationship between Embarrassment and prediction But again a stronger correlation with feedback (r = -0.17).

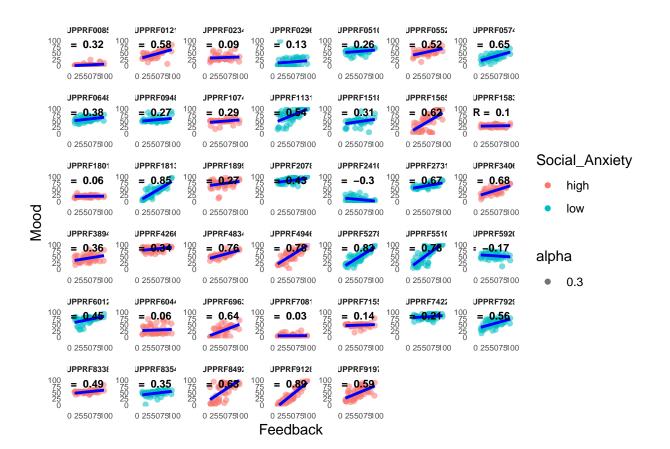
## [1] "average correlation between Embarrassment and Feedback: -0.172122401273124"



## Relationship between Mood and feedback

A stronger correlation between mood and feedback which is the same as before.

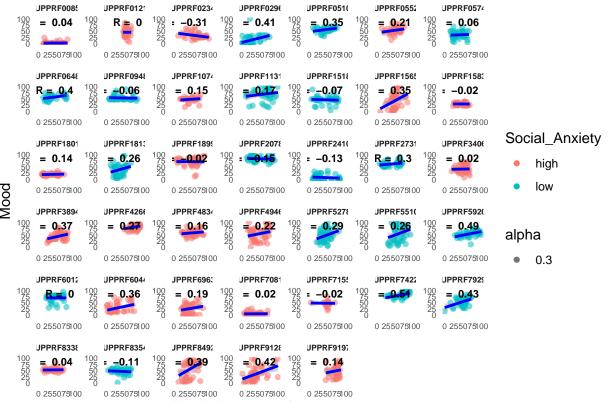
## [1] "average correlation between mood and feedback: 0.411449295966044"



# Relationship between Mood and prediction (pre-performance)

Similar to before, we have a weaker correlation with prediction and mood.

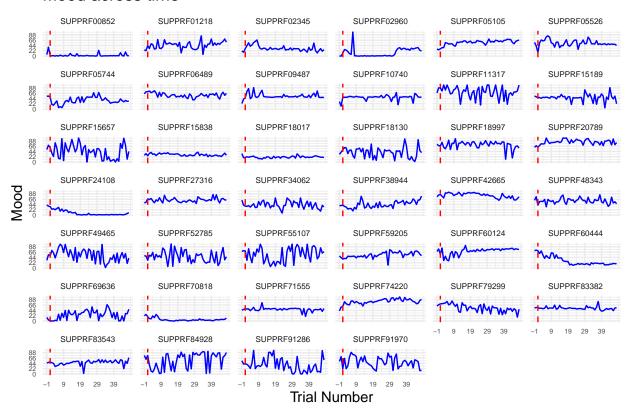
## [1] "average correlation between mood and prediction before performance: 0.163506456761896"



Prediction pre performance

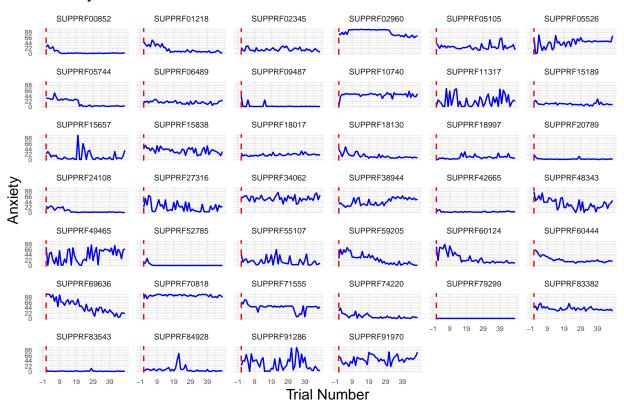
# Mood over time

#### Mood across time



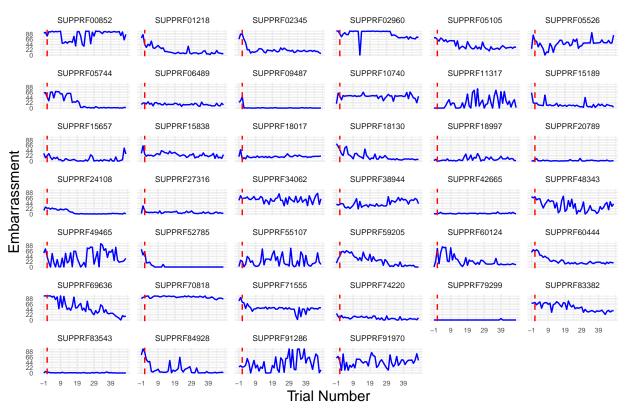
#### # Anxiety over time

#### Anxiety across time



## Embarrassment over time

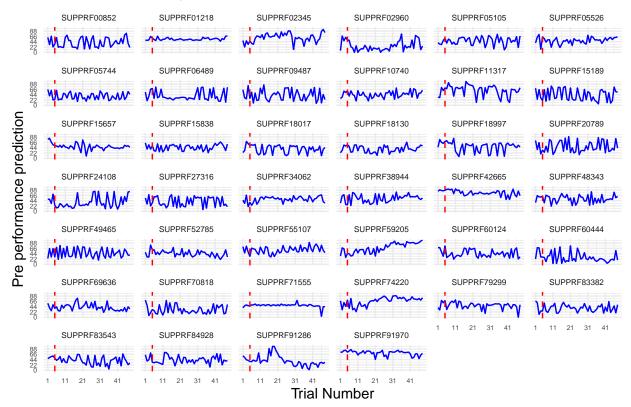
#### Embarrassment across time



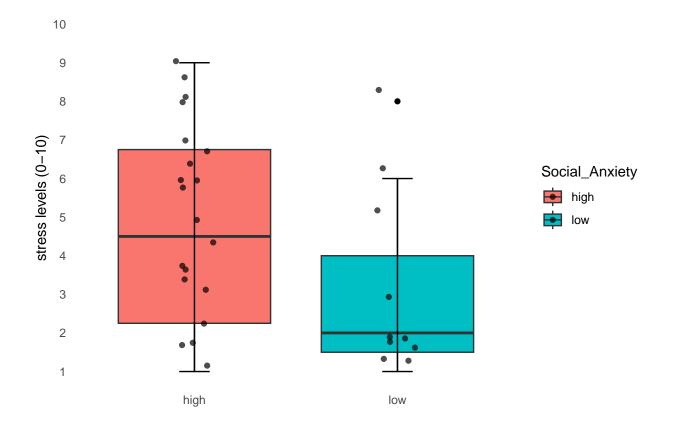
## Prediction before performance over time

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

### Prediction before performance across time



# Stress levels and social anxiety



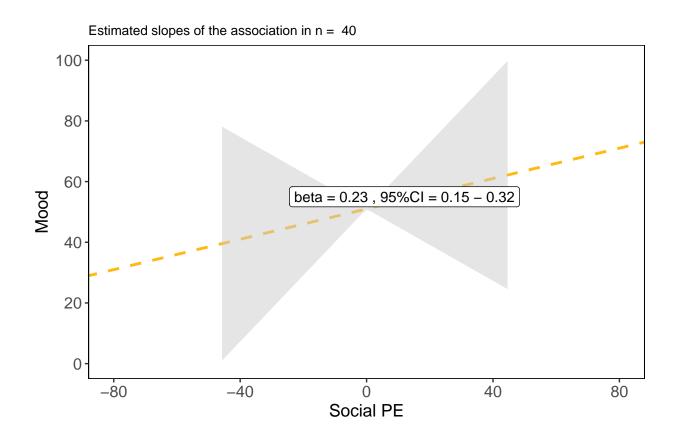
# LME models for Mood and SubjPE

The best model seems to be: Mood  $\sim \text{SubjPE} + \text{mini\_SPIN\_total} + (\text{SubjPE} \mid \text{Random\_ID})$ 

## [1] 15991.17

## [1] 16178.53

## [1] 15990.75



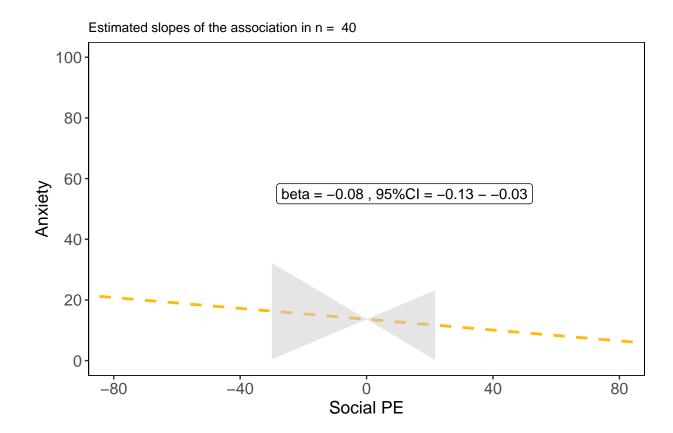
# LME models for Anxiety and SubjPE

The best model seems to be: Anxiety  $\sim$  SubjPE + mini\_SPIN\_total + (SubjPE | Random\_ID)

## [1] 15768.44

## [1] 15826.42

## [1] 15764.6



# LME models for Embarrassment and SubjPE

The best model seems to be: Embarrassment  $\sim$  SubjPE + mini\_SPIN\_total + (SubjPE | Random\_ID)

## [1] 16103.06

## [1] 16199.14

## [1] 16098.69

