Surprise study pilot 11

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Study description

In this pilot we screened people for high social anxiety. The task itself, is the same as pilot 10 (re-introducing the video). During the screening, we selected people scoring 6 or higher for mini in pilot 11, but when we collected this information again during the testing session, some people scored lower than 6 (5 or 6 people out of 28). We will also add 14 people from pilot 10 who scored high on mini-spin reaching a total sample of 42. This is the task version used for this pilot: https://app.gorilla.sc/admin/task/698788/editor?version=6

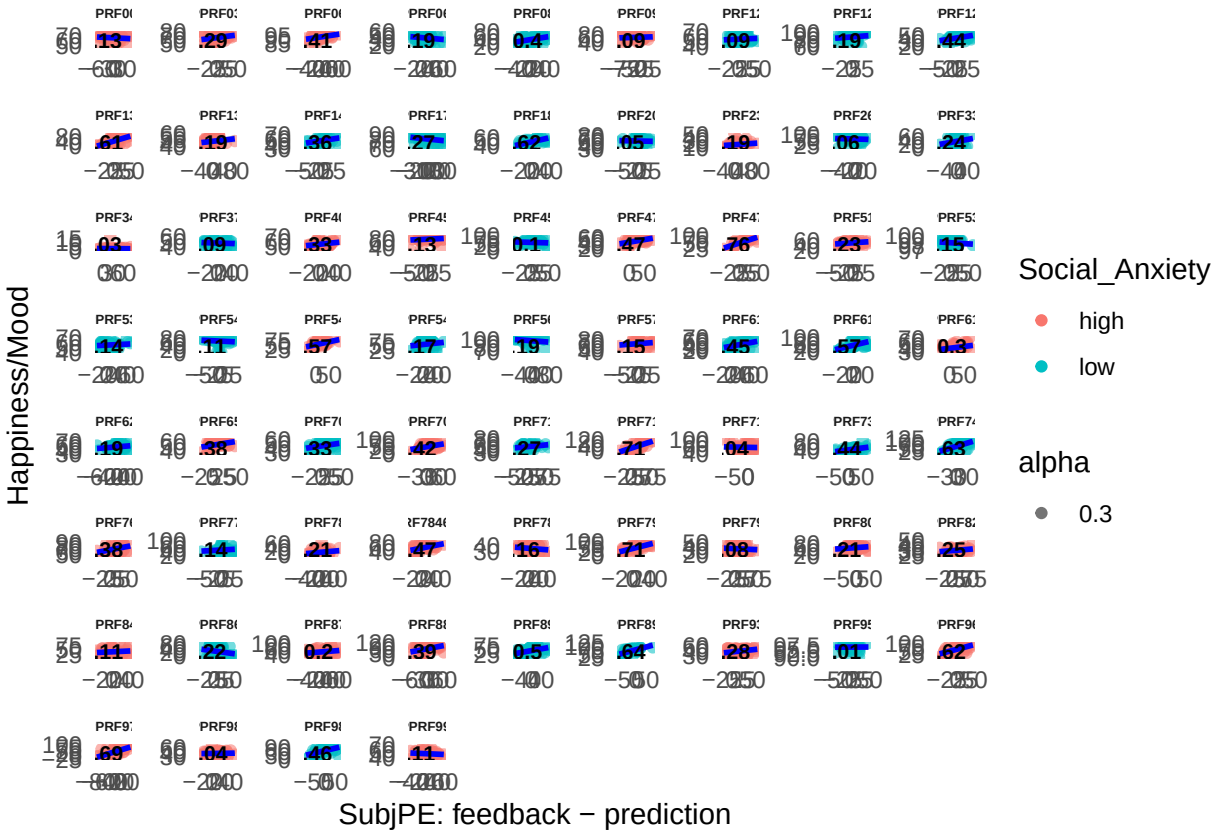
QUESTION: which mini-spin score shall we use in the analysis for people who scored lower than 6 the second time?

Relationship Mood and SubjPE

When looking at pilot 11 alone (people with high social anxiety) the correlation is 0.32 (n = 28), when adding the 14 people with high social anxiety from pilot 10, the correlation becomes 0.28 (n = 42). When adding the remaining people from pilot 10 with low social anxiety, the group correlation becomes 0.24 (n = 67).

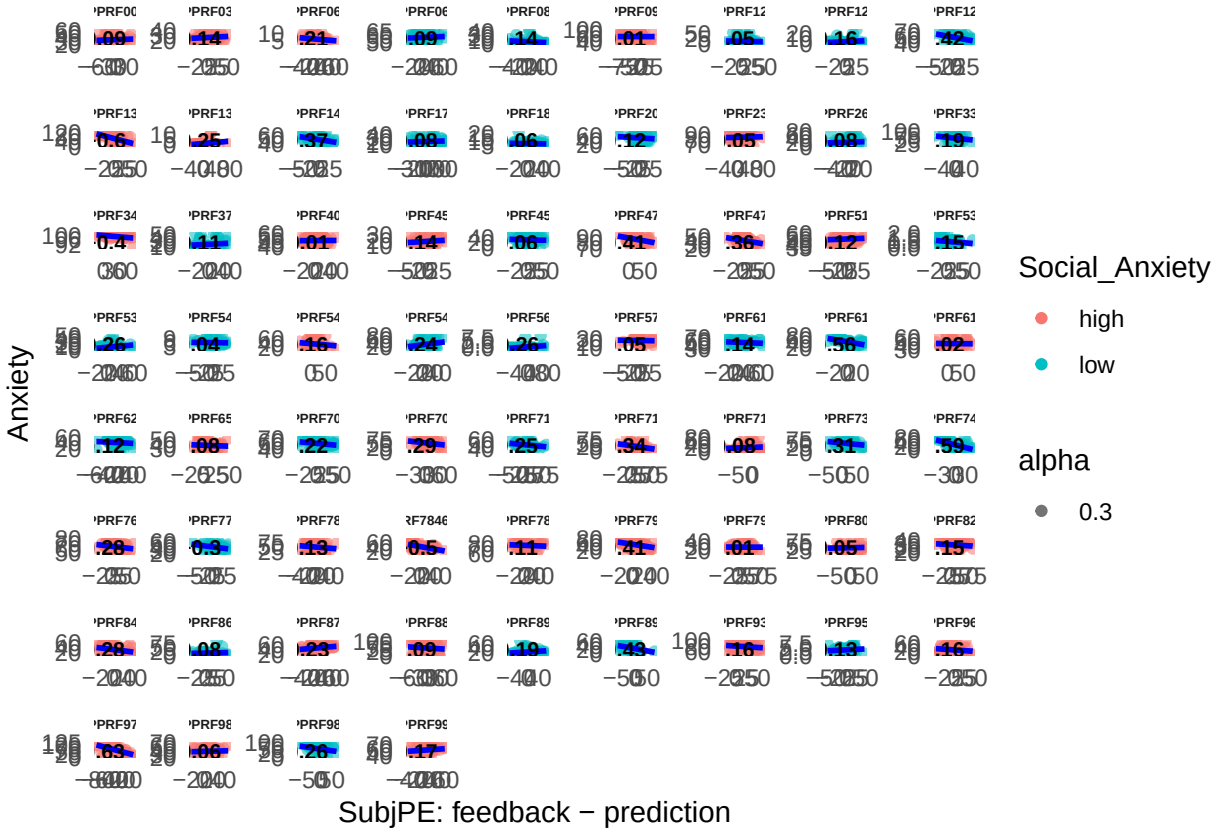
```
##   pilot_nr length(unique(Random_ID))
## 1       11                         28
## 2       10                         39
```

```
## [1] "average correlation between Mood and SubjPE: 0.24052169717836"
```



Relationship Anxiety and SubjPE

```
## [1] "average correlation between Mood and SubjPE: -0.112364418164298"
```



LME models for Mood and SubjPE

This is the best model: Mood ~ SubjPE * mini_SPIN_total + (SubjPE | Random_ID)

```
## Data: df_all_vid
## Models:
## model1: Mood ~ SubjPE + (1 | Random_ID)
## model2: Mood ~ SubjPE + (SubjPE | Random_ID)
##        npar   AIC   BIC logLik deviance  Chisq Df Pr(>Chisq)
## model1    4 26876 26900 -13434    26868
## model2    6 26556 26592 -13272    26544 324.03  2  < 2.2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## Linear mixed model fit by REML ['lmerMod']
## Formula: Mood ~ SubjPE + (1 | Random_ID)
##    Data: df_all_vid
## Control: lmerControl(optimizer = "bobyqa")
##
## REML criterion at convergence: 26871.4
##
## Scaled residuals:
##     Min      1Q  Median      3Q     Max
## -4.3951 -0.4394  0.0262  0.4898  4.1433
##
## Random effects:
##  Groups    Name        Variance Std.Dev.
##  Random_ID (Intercept) 354.8    18.84
##  Residual              227.5    15.08
## Number of obs: 3216, groups:  Random_ID, 67
##
## Fixed effects:
##             Estimate Std. Error t value
## (Intercept)  53.1184     2.3171   22.93
## SubjPE        0.1810     0.0118   15.34
##
## Correlation of Fixed Effects:
##        (Intr)
## SubjPE -0.020
```

```
## Linear mixed model fit by REML ['lmerMod']
## Formula: Mood ~ SubjPE + (SubjPE | Random_ID)
##    Data: df_all_vid
## Control: lmerControl(optimizer = "bobyqa")
##
## REML criterion at convergence: 26545.4
##
## Scaled residuals:
##     Min      1Q  Median      3Q     Max
## -5.2304 -0.4450  0.0299  0.4670  4.4731
##
## Random effects:
##  Groups    Name        Variance  Std.Dev. Corr
```

```
##  Random_ID (Intercept) 337.51577 18.3716
##            SubjPE        0.06459  0.2541  -0.10
##  Residual              196.31251 14.0112
## Number of obs: 3216, groups:  Random_ID, 67
##
## Fixed effects:
##             Estimate Std. Error t value
## (Intercept) 53.24688    2.26041  23.556
## SubjPE       0.18149    0.03315   5.475
##
## Correlation of Fixed Effects:
##        (Intr)
## SubjPE -0.096
```

```
## [1] 26879.42
```

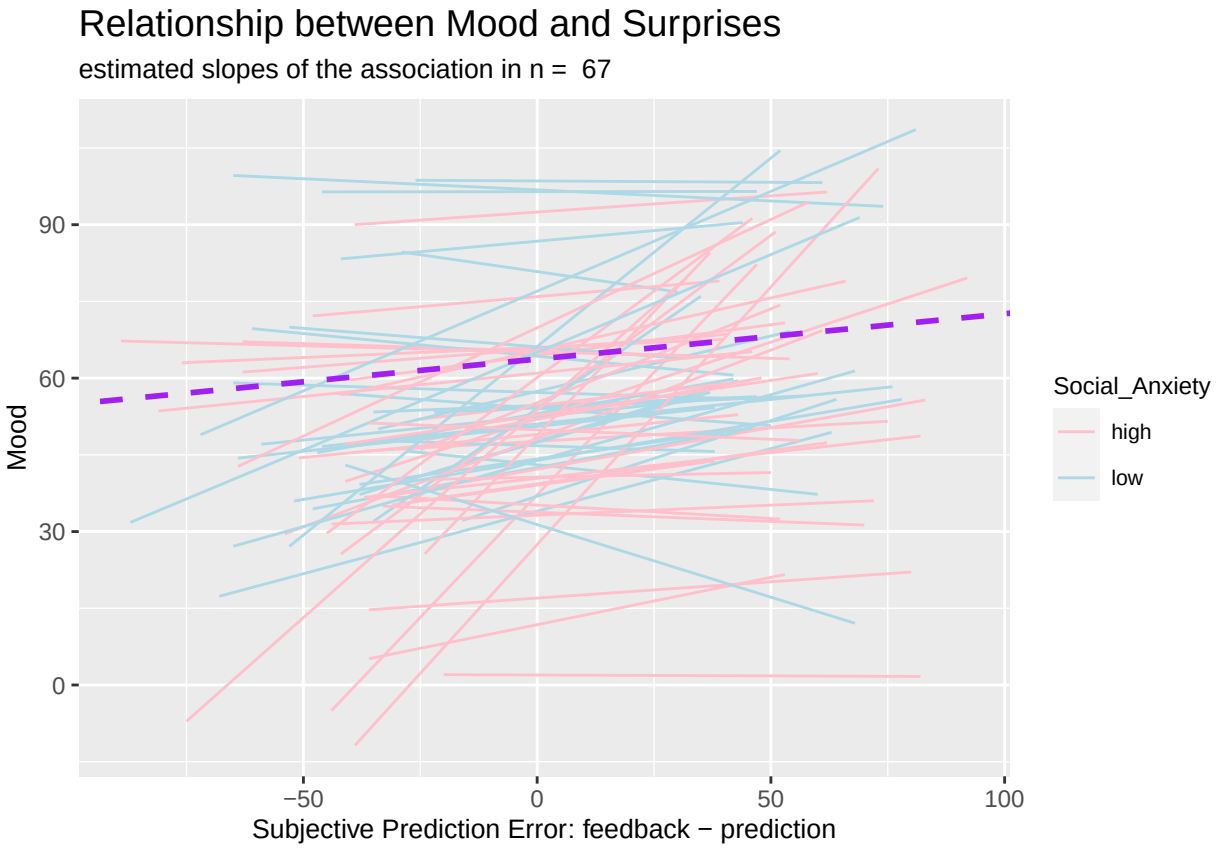
```
## [1] 26557.39
```

```
## Data: df_all_vid
## Models:
## model2: Mood ~ SubjPE + (SubjPE | Random_ID)
## model3: Mood ~ SubjPE * mini_SPIN_total + (SubjPE | Random_ID)
##        npar   AIC   BIC logLik deviance  Chisq Df Pr(>Chisq)
## model2    6 26556 26592 -13272    26544
## model3    8 26551 26599 -13267    26535 9.1992  2    0.01006 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## [1] 26558.94
```

```
## # A tibble: 4 x 5
##   effect term                   estimate std.error statistic
##   <chr>  <chr>                     <dbl>     <dbl>     <dbl>
## 1 fixed  (Intercept)              63.7      4.43        14.4
## 2 fixed  SubjPE                   0.0887   0.0673       1.32
## 3 fixed  mini_SPIN_total         -1.69     0.623       -2.71
## 4 fixed  SubjPE:mini_SPIN_total   0.0149   0.00943      1.58
```

Individual plots with LME for Mood



LME models for Anxiety and SubjPE

This is the best model: Anxiety ~ SubjPE * mini_SPIN_total + (SubjPE | Random_ID)

```
## Data: df_all_vid
## Models:
## model1: Anxiety ~ SubjPE + (1 | Random_ID)
## model2: Anxiety ~ SubjPE + (SubjPE | Random_ID)
##        npar   AIC   BIC logLik deviance  Chisq Df Pr(>Chisq)
## model1    4 26834 26858 -13413    26826
## model2    6 26706 26742 -13347    26694 132.54  2  < 2.2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

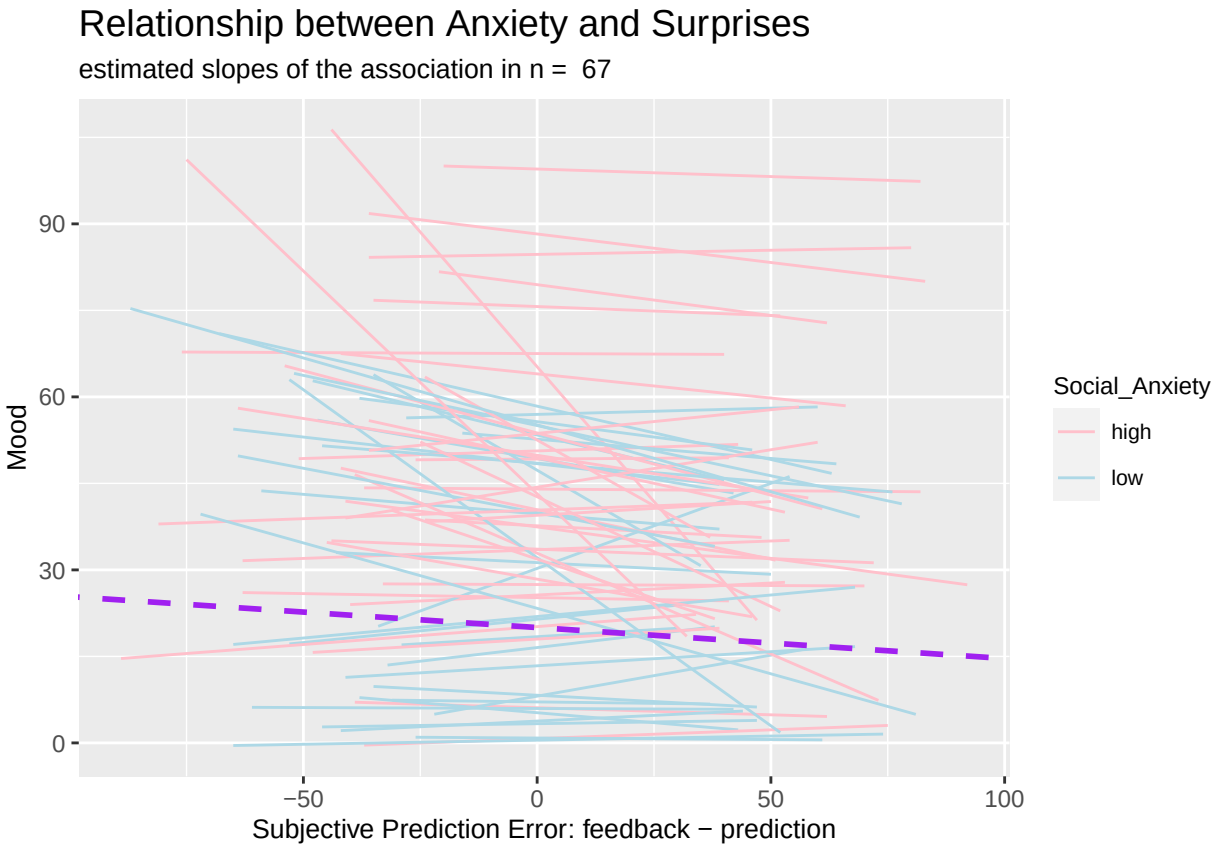
```
## Data: df_all_vid
## Models:
## model2: Anxiety ~ SubjPE + (SubjPE | Random_ID)
## model3: Anxiety ~ SubjPE * mini_SPIN_total + (SubjPE | Random_ID)
##        npar   AIC   BIC logLik deviance  Chisq Df Pr(>Chisq)
## model2    6 26706 26742 -13347    26694
## model3    8 26695 26743 -13339    26679 15.031  2  0.0005446 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## Linear mixed model fit by REML ['lmerMod']
## Formula: Anxiety ~ SubjPE * mini_SPIN_total + (SubjPE | Random_ID)
##    Data: df_all_vid
## Control: lmerControl(optimizer = "bobyqa")
##
## REML criterion at convergence: 26687.5
##
## Scaled residuals:
##     Min      1Q  Median      3Q     Max
## -4.5339 -0.4766 -0.0463  0.3746  5.5091
##
## Random effects:
##  Groups    Name        Variance  Std.Dev. Corr
##  Random_ID (Intercept) 415.18238 20.3760
##            SubjPE        0.03171  0.1781  -0.27
##  Residual              207.13151 14.3921
## Number of obs: 3216, groups:  Random_ID, 67
##
## Fixed effects:
##                          Estimate Std. Error t value
## (Intercept)            19.999718   5.131219   3.898
## SubjPE                 -0.053685   0.050890  -1.055
## mini_SPIN_total         2.914404   0.721732   4.038
## SubjPE:mini_SPIN_total -0.005719   0.007100  -0.806
##
## Correlation of Fixed Effects:
##             (Intr) SubjPE m_SPIN
## SubjPE      -0.238
## mn_SPIN_ttl -0.873  0.209
```

```
## SbPE:_SPIN_  0.211 -0.874 -0.244
## optimizer (bobyqa) convergence code: 0 (OK)
## Model is nearly unidentifiable: very large eigenvalue
##  - Rescale variables?
```

```
## # A tibble: 4 x 5
##   effect term                   estimate std.error statistic
##   <chr>  <chr>                     <dbl>     <dbl>     <dbl>
## 1 fixed  (Intercept)            20.0       5.13        3.90
## 2 fixed  SubjPE                 -0.0537    0.0509     -1.05
## 3 fixed  mini_SPIN_total         2.91      0.722       4.04
## 4 fixed  SubjPE:mini_SPIN_total -0.00572   0.00710    -0.806
```

Individual plots with LME for Anxiety



ICC for anxiety

we will now look at the ICC outcome for anxiety The ICC for anxiety is 0.51, which is moderate according to guidelines by Koo and Li (2016): below 0.50: poor between 0.50 and 0.75: moderate between 0.75 and 0.90: good above 0.90: excellent

```
## [1] "lmer for anxiety with just the intercept"
```

```
## [1] 0.6886505
```

```
##                 2.5 %   97.5 %
## .sig01      18.90370 26.63751
## .sigma      14.69682 15.44104
## (Intercept) 32.44939 43.30123
```

ICC for mood

The ICC for mood is 0.42, which is lower than anxiety and is actually within the poor category, according to guidelines by Koo and Li (2016): below 0.50: poor between 0.50 and 0.75: moderate between 0.75 and 0.90: good above 0.90: excellent

```
## [1] "lmer for mood with just the intercept"
```

```
## [1] 0.5685826
```

```
##                 2.5 %   97.5 %
## .sig01      15.14000 21.38114
## .sigma      15.26813 16.04128
## (Intercept) 49.47212 58.20201
```