# Bayes Task Analyses (NSF Study Dataset)

**Total number of participants**

50

**Data present for**

WR: 48

TSD: 24

SR: 22

*Some IDs that completed WR missing their sleep loss condition data, and vice versa for some IDs that completed their sleep loss conditions. Breakdown below. Because of this, the N in the separate probit analyses for SR and TSD come up to 49.*

**Participants missing demographic data:**

41, 50, 59, 60, 61

**Participants missing KSS data (Condition):**

02 (WR), 41 (WR), 50 (TSD), 59 (WR), 60 (WR), 61 (WR)

*Except for 02, the ones missing KSS data are also the ones missing demographic data.*

**Participants with SR trials data, but missing WR trials data**

03

**Participants with TSD trials data, but missing WR trials data**

50

**Participants with WR trials data, but missing their respective sleep loss trials data**

41, 59, 60, 61 *also the ones missing demo + KSS data*

## KSS manipulation check

Used log-transformed KSS here due to distribution skew.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **logKSS** | | |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 0.89 | 0.74 – 1.04 | **<0.001** |
| Condition [TSD] | 0.94 | 0.71 – 1.16 | **<0.001** |
| Condition [SR] | 0.64 | 0.41 – 0.86 | **<0.001** |
| **Random Effects** | | | |
| σ2 | 0.17 | | |
| τ00 PtID | 0.08 | | |
| ICC | 0.31 | | |
| N PtID | 45 | | |
| Observations | 87 | | |
| Marginal R2 / Conditional R2 | 0.407 / 0.592 | | |

## Pooled model (excluding no brainers)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PtResp** | | |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 0.64 | 0.62 – 0.67 | **<0.001** |
| Condition [TSD] | -0.01 | -0.05 – 0.04 | 0.766 |
| Condition [SR] | 0.00 | -0.04 – 0.05 | 0.925 |
| LogBaserate | 0.38 | 0.35 – 0.41 | **<0.001** |
| LogLLA | 0.20 | 0.19 – 0.22 | **<0.001** |
| Condition [TSD] \*LogBaserate | 0.02 | -0.03 – 0.07 | 0.462 |
| Condition [SR] \*LogBaserate | -0.03 | -0.08 – 0.02 | 0.312 |
| Condition [TSD] \* LogLLA | -0.00 | -0.03 – 0.03 | 0.833 |
| Condition [SR] \* LogLLA | -0.02 | -0.05 – 0.01 | 0.263 |
| **Random Effects** | | | |
| σ2 | 0.17 | | |
| τ00 PtID | 0.00 | | |
| ICC | 0.01 | | |
| N PtID | 50 | | |
| Observations | 3008 | | |
| Marginal R2 / Conditional R2 | 0.326 / 0.335 | | |

## SR-only model, excluding NoBrainers

WR trials include those who completed TSD.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PtResp** | | |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 0.64 | 0.62 – 0.67 | **<0.001** |
| Condition [SR] | 0.00 | -0.04 – 0.05 | 0.917 |
| LogBaserate | 0.38 | 0.35 – 0.41 | **<0.001** |
| LogLLA | 0.20 | 0.19 – 0.22 | **<0.001** |
| Condition [SR] \*LogBaserate | -0.03 | -0.08 – 0.02 | 0.315 |
| Condition [SR] \* LogLLA | -0.02 | -0.05 – 0.01 | 0.265 |
| **Random Effects** | | | |
| σ2 | 0.17 | | |
| τ00 PtID | 0.00 | | |
| ICC | 0.01 | | |
| N PtID | 49 | | |
| Observations | 2240 | | |
| Marginal R2 / Conditional R2 | 0.318 / 0.327 | | |

## TSD-only model, excluding NoBrainers

WR trials include those who completed SR.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PtResp** | | |
| *Predictors* | *Estimates* | *CI* | *p* |
| (Intercept) | 0.64 | 0.62 – 0.67 | **<0.001** |
| Condition [TSD] | -0.01 | -0.05 – 0.04 | 0.783 |
| LogBaserate | 0.38 | 0.35 – 0.41 | **<0.001** |
| LogLLA | 0.20 | 0.19 – 0.22 | **<0.001** |
| Condition [TSD] \*LogBaserate | 0.02 | -0.03 – 0.07 | 0.456 |
| Condition [TSD] \* LogLLA | -0.00 | -0.03 – 0.02 | 0.831 |
| **Random Effects** | | | |
| σ2 | 0.16 | | |
| τ00 PtID | 0.00 | | |
| ICC | 0.02 | | |
| N PtID | 49 | | |
| Observations | 2304 | | |
| Marginal R2 / Conditional R2 | 0.338 / 0.353 | | |