

Supporting information to ‘Registered Report Protocol: Survey on attitudes and experiences regarding preregistration in psychological research’:

## **S1: Power analyses**

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## Test for Hypothesis 1: Overall

### Effect sizes from literature

- $R^2 = 0.39$  [1]
- $R^2 = 0.39$  [2]
- $R^2 = 0.443$  [3]
- $R^2 = 0.41$  [4]
- $R^2 = 0.304$  [5] → chosen for power analysis

### Power analysis

- F tests - Linear multiple regression: Fixed model,  $R^2$  deviation from zero
- Analysis: A priori: Compute required sample size
- Input: Effect size  $f^2 = 0.4367816$ 
  - $\alpha$  err prob = 0.05
  - Power ( $1 - \beta$  err prob) = 0.95
  - Number of predictors = 6
- Output: Noncentrality parameter  $\lambda = 24.0229880$ 
  - Critical  $F = 2.2946013$
  - Numerator df = 6
  - Denominator df = 48
  - Total sample size = 55
  - Actual power = 0.9524763

## Test for Hypothesis 1: Attitudes as predictor

### Effect sizes from literature

- $R^2 = 0.24$  [1]
- $R^2 = 0.3364$  [2]
- $\rho^2 = 0.3249$  [3]
- $R^2 = 0.2116$  [4] → chosen for power analysis

### Power analysis

- t tests - Linear multiple regression: Fixed model, single regression coefficient
- Analysis: A priori: Compute required sample size
- Input: Tail(s) = On
  - Effect size  $f^2 = 0.2683917$
  - $\alpha$  err prob = 0.05
  - Power ( $1 - \beta$  err prob) = 0.95
  - Number of predictors = 6
- Output: Noncentrality parameter  $\delta = 3.3574472$ 
  - Critical  $t = 1.6895725$
  - Df = 35
  - Total sample size = 42
  - Actual power = 0.9501825

## Test for Hypothesis 1: Subjective norm as predictor

### Effect sizes from literature

- $R^2 = 0.12$  [1]
- $R^2 = 0.1936$  [2]
- $\rho^2 = 0.16$  [3]
- $R^2 = 0.1156$  [4] → chosen for power analysis

### Power analysis

- t tests - Linear multiple regression: Fixed model, single regression coefficient
- Analysis: A priori: Compute required sample size
- Input: Tail(s) = One
  - Effect size  $f^2 = 0.1307101$
  - $\alpha$  err prob = 0.05
  - Power ( $1 - \beta$  err prob) = 0.95
  - Number of predictors = 6
- Output: Noncentrality parameter  $\delta = 3.3332204$ 
  - Critical  $t = 1.6646246$
  - Df = 78
  - Total sample size = 85
  - Actual power = 0.9514666

# Test for Hypothesis 1: Perceived behavioral control as predictor

## Effect sizes from literature

- $R^2 = 0.18$  [1]
- $R^2 = 0.0441$  [2] → chosen for power analysis
- $\rho^2 = 0.2916$  [3]
- $R^2 = 0.2116$  [4]

## Power analysis

- t tests - Linear multiple regression: Fixed model, single regression coefficient
- Analysis: A priori: Compute required sample size
- Input: Tail(s) = One
  - Effect size  $f^2 = 0.0461345$
  - $\alpha$  err prob = 0.05
  - Power ( $1 - \beta$  err prob) = 0.95
  - Number of predictors = 6
- Output: Noncentrality parameter  $\delta = 3.2996579$ 
  - Critical  $t = 1.6515348$
  - Df = 229
  - Total sample size = 236
  - Actual power = 0.9500185

## Test for Hypothesis 2: Three multiple regression models

### Effect size from literature

- $\eta^2 = .05$  [6], the corresponding  $F$  value was used to calculate  $R^2$

### Power analysis

- t tests - Linear multiple regression: Fixed model, single regression coefficient
- Analysis: A priori: Compute required sample size
- Input: Tail(s) = Two
  - Effect size  $f^2 = 0.0557895$
  - $\alpha$  err prob = 0.0167
  - Power ( $1 - \beta$  err prob) = 0.95
  - Number of predictors = 2
- Output: Noncentrality parameter  $\delta = 4.0637042$ 
  - Critical  $t = 2.4070603$
  - Df = 293
  - Total sample size = 296
  - Actual power = 0.9505850

## References

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