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


