Supplement

Information on Power Estimations

We estimated statistical power for a range of typical population effects using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007). For all power calculations, we assumed a two-tailed test with an alpha level of .05. The results obtained by G\*Power are only valid estimates of power when certain assumptions are met. The manual (specifying these assumptions) and related literature can be found here: http://www.gpower.hhu.de/

*Correlational studies*: We calculated the power for detecting an existing correlation between two continuous variables.

* Test family (Exact); statistical test: Correlation: Bivariate normal model; Post-hoc power analyses (Compute achieved power) –> two-tailed test

*Experimental studies – between-participants designs*: For all studies in this category, we calculated the power for a 2 groups between-participants design.

* Test family (t-test); statistical test: means – differences between two independent means (two groups); Post-hoc power analyses (Compute achieved power) –> two-tailed test
* This leads to an equivalent outcome to using “F-Test Family: ANOVA, Fixed effects, omnibus, one-way (two-groups)”

*Experimental studies - within-participants designs*: For all studies in this category, we calculated the power for a 2 measurements within-participants design. For within-participants designs, power also depends on the correlation between the repeated measurements. The higher this correlation, the higher the power. We set this correlation to .5.

* Test family (t-test); statistical test: means – differences between two dependent means (matched pairs); Post-hoc power analyses (Compute achieved power) –> two-tailed test
* This leads to a similar outcome to using “F-Test Family: ANOVA, repeated measures, within factors (2 measurements, .5 correlation between measurements; nonsphericity correction = 1).
* The t-test analysis is slightly more favorable in terms of power.

*Experimental studies - mixed designs*: When a study employed a mixed design (i.e., there were within-participants and between-participants factors) we calculated power separately for the within-participants and the between-participants factor and the interaction.

* Within-factor
  + Test family F-Test; repeated measures, within factors (2 measurements, number of groups = 2; .5 correlation between measurements; nonsphericity correction =1)
* Between-factor
  + Test family F-Test; repeated measures, between factors (2 measurements, number of groups = 2; .5 correlation between measurements)
* Interaction factor
  + Test family F-Test; repeated measures, within-between interaction(2 measurements, number of groups = 2; .5 correlation between measurements; nonsphericity correction =1)

*Quasi-experimental studies*: For all studies in this category, we calculated the power for a 2 groups between-participants design.

* Test family (t-test); statistical test: means – differences between two independent means (two groups); Post-hoc power analyses (Compute achieved power) –> two-tailed test
* This leads to an equivalent outcome to using “F-Test Family: ANOVA, Fixed effects, omnibus, one-way (two-groups)”