Triage

Coder initials

- ○ RTT
- ○ EZ
- ○ HP
- ○ [ ] Other

Enter the article's **PMCID.**

[ ]

Is this a study protocol?

- ○ Yes
- ○ No

Does this article **meet our inclusion criteria**? Included articles must use GPower to perform a power calculation. The power calculation can solve for sample size, power, effect size, or any other relevant parameter and may be conducted before or after the study. If the article discusses GPower, but does not use it to conduct a power calculation for a study **presented within that article**, the article should be excluded (e.g., articles that run power calculations only for future studies should be excluded).

- ○ Include
- ○ Exclude

Article meta-data

Who are the "**participants**" in the study the power calculation was written for? In other words, what type of study is this?

- ○ Humans
- ○ Non-human animals (this includes both in vivo and in vitro studies)
- ○ [ ] Other

Enter the name of the **journal** where the article was published.

Enter the **year** the article was published.

Enter the **Journal Impact Factor for 2 YEARS PRIOR to the year of publication** (i.e., if the article is published in 2021, enter the JIF for 2019. This is the JIF that would have been available the year of publication. At the moment, JIFs have only been calculated for 2020 and earlier years).

Use the Journal Citation Report from https://jcr.clarivate.com/jcr/home. If the journal is not listed in that database, or does not have an impact factor for the year the article was published, enter "NA" into this box.

Power Calc Type

Complete this form for only one power calculation that solves for sample size. If there is one power calculation that is unambiguously identified, or likely to be, the primary power calculation, select this one. If there's no indication that one power calculation is more prominent than another one, select the power calculation that solves for sample size that first appears in the article. If there is only one power calculation that solves for sample size, select that one.

Copy-paste text from the article that describes this power calculation. This text should be **VERBATIM**. Do not put text in this box that doesn't come directly from the article. You do not need to include " " quotation marks.

What **type of power calculation(s)** does this article have? Select multiple options if there are multiple power calculations that solve for different variables.

- [ ] Solves for **sample size** (often called *a priori*)
- [ ] Solves for **power** (often called *post hoc*)
- [ ] Solves for **effect size** (often called *sensitivity*)
- [ ] _____ Other
- [ ] Unsure

Does the article contain **more than one power calculation** that solves for sample size?

- ○ Yes
- ○ No

Do you feel **your statistical knowledge is adequate** to fill out this form for this specific power calculation?

- ○ Yes
- ○ Probably
- ○ No (If you select this option, the survey will terminate and we will be sure to get a stats savvy coder to be the other coder for this power calculation)

Power Calc Detail

Does the power calculation include the **version of GPower** used? If yes, enter the version number.

- ○ _____ Yes
- ○ No

Does the power calculation report the **power or beta** (i.e., 1 - power) used? If yes, enter the power value (e.g., 0.8).

- ○ Yes (0.80)
- ○ _____ Yes

- No

Does the power calculation report **alpha or the p-value** used? If yes, enter the value (e.g., 0.05).

- Yes (0.05)
- [ ] Yes
- No

Does the power calculation report the **sample size**? If yes, enter the **TOTAL sample size** (e.g., if the power calulcation has 2 groups with 30 participants each, then enter 60). Enter the sample size used in the power caluclation (rather than the actual sample size used). Some articles may add participants to their sample size because of attrition. In this case, enter the sample size output from the power calculaiton (i.e., what's expected after attrition).

- [ ] Yes
- No

Does the power calculation report the **type of effect size**?

- d
- f
- r
- w
- f2
- ratios (e.g.odds ratio or risk ratio)
- [ ] Other: Standardized
- Other: **Non**-standardized (e.g., 5 points on a questionnaire scale). [ ]
- No

Does the power calculation report the **value for the effect size**? If yes, then enter the value (e.g. 0.5). Only enter a number here. We will know what type of effect size it is

based on your response to the previous question.

- ○ [ ] Yes
- ○ No

Does the power calculation report the **statistical test?**

- ○ t-test
- ○ ANOVA
- ○ correlation (e.g., Pearson's or Spearman's)
- ○ test of proportions (e.g., Fisher's, or chi-squared)
- ○ [ ] other regression (please describe)
- ○ [ ] other non-regression (please describe)
- ○ the statistical test is NOT reported

Are there **any other elements of the power calculation** that should be reported, but are not reported? For example, the expected proportions in Fisher's test or the number of predictors in a regression. You don't need to reply to this question.

[ ]

Can you **reproduce** the power calculation in GPower (within a few minutes)? If yes, take a screenshot of GPower to show the reproduction and save the screenshot filename as the PMCID.

- ○ Yes, based solely on the information in the article or its supplementary material
- ○ Yes, but I've had to make some assumptions. (please list the assumptions you made) [ ]
- ○ No

Does the article mention a **justification or basis for the effect size** chosen in their power calculation (you may select multiple options)?

- [ ] Previously published research
- [ ] Their own pilot data (that is not published)
- [ ] Conventions of small, medium, and large effect sizes (e.g., "we powered for a medium effect size of Cohen's d = 0.5")
- [ ] An effect size of interest or minimal clinically improtance difference (MCID)
- [ ] No justification or basis is reported
- [ ] Reference to other study to justify their calculation in general, but not specifically their chosen effect size (e.g., they may not state the effect size)
- [ ] [ ] Other (please describe)

Does the power calculation **mention accounting for multiple comparisons**?

- ○ **Yes**
- ○ **No**, and the **article contains multiple analyses** with no clear indication of a sole primary analysis for which this power calculation is for. (Note, if they are powering for an ANOVA and reporting multiple effects--e.g., two main effects and an interaction for a 2x2 ANOVA--then there should be a correction for multiple comparisons).
- ○ **No**, and **there is no reason to account for multiple comparisons** (e.g., there is only one analysis, or this analysis is clearly demarcated as the primary analysis)
- ○ Unsure

Justify your response to the previous question regarding **multiple comparisons**. Or enter "NTA" for "nothing to add".

Is this power calculation for a within-between **ANOVA** interaction or within ANOVA main effect?

- ○ **Yes**, and the researchers selected a **non-default option**.
- ○ **Yes**, but the researchers use **the default option.**
- ○ **Yes, but I cannot reasonably assume which option they used.**
- ○ **No**

- **Unsure whether the power calculation was for an ANOVA or another type of statistical test.**

Does the **power calculation match a statistical analysis used in the article**. For example, whereas a paired t-test could be used in the power calculation, the article may use an independent samples t-test. The power calculation could also be completely unrelated to the actual analyses conducted (e.g., powered for an ANOVA, but Fisher's tests conducted).

- Yes
- No
- Unsure (there's not enough information to reasonably code yes or no).
- The article is a protocol

Justify your response to the previous question regarding whether the **power calculation matches a statistical analysis in the article.** Or enter "NTA" for "nothing to add".

Is there **any other reason** (beyond the two previous questions on ANOVAs and matching) **why the power calculation contains an error or is inappropriate**? For example, the effect size entered could be non-standardized, incorrectly calculated, incorrectly identified in relation to Cohen's indices without justification (e.g., calling $f = 0.25$ a small effect size), or performed after the study is complete. We do not have an exhaustive list of all possible errors, so please also code "Yes" for this question if you come across an error that we haven't described.

- Yes
- Likely, but I cannot be certain based on the information provided.
- No
- Unsure (there's not enough information to reasonably code yes or no).

Justify your response to the previous question regarding whether the power calculation is **inappropriate for any other reason**. Or enter "NTA" for "nothing to add". If you responded "Yes" or "Likely..." to the previous question, you must explain why in this box.

If an error is present, **can the impact of the error be quantified**? For example, if the default ANOVA option was mistakenly chosen, what is the difference in sample size between what the article calculated and the same calculation with a different option selected? If no error is present in the calculation, you may leave this box blank.

Provide any additional comments you might have **about this specific power calculation.** (optional)

Final Comments

Provide any additional comments you may have about **this survey form or this study in general** (optional).

Powered by Qualtrics