

Using G*Power to Estimate Necessary Sample Size

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It is a powerful tool to estimate the sample size needed for certain basic statistical analyses to detect a given effect size.

Before Starting

Effect Size	Power Level	Alpha Level
Guestimate based on literature, theory, or intuition	Generally 0.8 (Power = 80%)	Generally 0.05 (p-value cut off)

How to Use it

In general, requires four steps:

- 1** Select the appropriate analysis type
- 2** Add effect size(s), power level, and alpha level
- 3** Analyze
- 4** Repeat, modifying the effect size

Sensitivity Analysis

If the effect size is just a guess, try several sizes and assess the range of possible required sample sizes:

Can also use G*Power to find necessary effect size, actual power level, or alpha level given that you have the other three features