

19.1: Power Analysis

We can compute a power analysis using functions from the `pwr` package. Let's focus on the power for a t-test in order to determine a difference in the mean between two groups. Let's say that we think that an effect size of Cohen's $d=0.5$ is realistic for the study in question (based on previous research) and would be of scientific interest. We wish to have 80% power to find the effect if it exists. We can compute the sample size needed for adequate power using the `pwr.t.test()` function:

```
0.5pwr.t.test(d=, power=.8)
```

```
##
##      Two-sample t test power calculation
##
##              n = 64
##              d = 0.5
##      sig.level = 0.05
##              power = 0.8
##      alternative = two.sided
##
## NOTE: n is number in *each* group
```

Thus, about 64 participants would be needed in each group in order to test the hypothesis with adequate power.

This page titled [19.1: Power Analysis](#) is shared under a [CC BY-NC 4.0](#) license and was authored, remixed, and/or curated by [Russell A. Poldrack](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.