- In the previous example, we wanted to calculate the power of a study looking at whether the mean of a particular sample (i.e., people who seek clinical help) differed from the mean of the population. This is also known as the one-sample t-test.

- How about testing to see whether two independent sample means differ from each other (e.g., independent samples t-test)?

Power calculations for differences between two independent means

To calculate Cohen's d, we want the difference between two mean (μ1-μ2) under H1 minus the difference (μ1-μ2) under H0, divided by σ. Under H0 though, (μ1-μ2) is zero (because there is no difference between the means under the null hypothesis) so,

$$d = \frac{(\mu 1 - \mu 2) - 0}{\sigma} = \frac{(\mu 1 - \mu 2)}{\sigma}$$