

Statistical Significance

- *Null hypothesis:*
An exact statement that there is no relationship between the variables being studied. E.g., $\mu_1 = \mu_2$ is a null hypothesis statement that the population mean of group 1 is equal to the population mean of group 2.
- *Research hypothesis:*
The alternative hypothesis that there is a relationship between the variables. E.g., $\mu_1 \neq \mu_2$ is a research hypothesis statement that the population means of two groups are not equal.
- What is the probability that the obtained results would occur if the null hypothesis is correct? Statistical tests allow you to determine this probability.
- When it is very unlikely that the obtained results would occur under the null hypothesis (usually $p < .05$), the null hypothesis is rejected. The results are said to be statistically significant.