

Looking for Differences

T-test and Chi-square
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T-test

- T-tests are reputed to be the easiest statistical test to run
- Examine two groups to see if there is a difference

Three kinds of t-tests

- One-sample t-test
 - Compares the group to a theoretical group
- Independent t-test
 - Used for two groups that are unrelated
- Dependent t-test
 - Used for related or matched groups
 - Looking at repeated measures, I.e. pre-test and post-test
 - Looking at differences when a relationship (I.e. siblings or spouses) matters

Reading about t-test results

- The value of t might be reported
 - We don't care about it
- They might report something called degrees of freedom or df
 - We don't care about that either
- They will report whether or not the difference was statistically significant
 - We care about that!

T-test is statistically significant

- What this really means is that we reject the null hypothesis and accept that there might actually be a difference between the two groups and that the difference is not caused by error

Chi-square test

- Used for nominal or ordinal data
- Compares what you observed in your sample to what you expected
- Determines if there is a difference between those

Reading about chi-square

- They may report the value of chi-square
 - We don't care about that
- They may report degrees of freedom
 - We don't care about that either
- They should report if the difference is statistically significant
 - We care about that!