

10.5: Choosing Which Statistic- t-test Edition

Time to stop and reflect. You've now learned about z-scores, three different kinds of t-tests, non-parametric alternatives for some of the t-tests, and confidence intervals. Good job!

? Exercise 10.5.1

What are the three t-tests that you've learned?

Answer

- One-sample t-test
- Independent sample t-test
- Dependent sample t-test

You might be wondering how to decide when to use which analysis. It all depends on how many groups you have, what kind of variable your DV is (quantitative or qualitative), and whether the groups are related or not. Below is a list of all of the analyses that will be covered in this textbook; what we have covered already is in bold.

- **Quantitative DV:**
 - **One group: One-sample t-test (comparing your one sample to the population)**
 - **One IV with 2 groups: independent or dependent t-tests**
 - **Related groups (pairs): dependent samples t-test**
 - **Unrelated groups: independent samples t-test**
 - One IV with 3+ groups: ANOVA (next!)
 - Related groups: Repeated Measures ANOVA
 - Unrelated groups: Between Groups ANOVA
 - Two IVs with 2+ groups: Factorial ANOVA (later)
 - Two IVs with a range of values (no groups): Correlation (later)
- Qualitative DV:
 - One IV: Goodness of Fit Chi-Square (later)
 - Two IVs: Test of Independence Chi-Square (later)
- Combination of IVs & DVs: Regression
- **Ranked DV:**
 - **One IV with 2 groups:**
 - **Related groups: Wilcoxon Matched-Pairs Signed-Rank Test**
 - **Unrelated groups: Mann-Whitney U**
 - One IV with 3+ groups: Kruskal-Wallis One-Way ANOVA (later)

Keep this list or the [attached decision tree](#) so that you can decide which analysis to conduct whenever you get new data sets.

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