One Population Proportion

Sample can be considered a simple random sample

Large enough sample size ()

- Confidence Interval: At least 10 of each outcome ()
- Hypothesis Test: At least 10 of each outcome ()

Two Population Proportions

Samples can be considered two simple random samples

Samples can be considered independent of one another

Large enough sample sizes ()

- Confidence Interval: At least 10 of each outcome ()
- Hypothesis Test: At least 10 of each outcome () - Where (the common population proportion estimate)

One Population Mean

Sample can be considered a simple random sample

Sample comes from a normally distributed population

- This assumption is less critical with a large enough sample size (application of the C.L.T.)

One Population Mean Difference

Sample of differences can be considered a simple random sample

Sample of differences comes from a normally distributed population of differences

- This assumption is less critical with a large enough sample size (application of the C.L.T.)

Two Population Means

Samples can be considered a simple random samples

Samples can be considered independent of one another

Samples each come from normally distributed populations

- This assumption is less critical with a large enough sample size (application of the C.L.T.)

Populations have equal variances – pooled procedure used

- If this assumption cannot be made, unpooled procedure used
- Non-parametric analog is **Mann Whitney test** (using medians)

Paired Samples t-test

Sample of differences considered a simple random sample

Normal distribution of differences

Examine data: Access if paired measures are in fact correlated (scatter plot)

Non-parametric analogue of the Paired t-test is **Wilcoxon Signed Rank Tes**t (uses median)