

## 14.1: Introduction to Non-Parametric Tests

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All of the inferential tests we have covered so far in this book are parametric tests. Parametric tests use data for quantitative variables measured on interval or ratio scales. In  $t$ -tests and ANOVAs, we compared scores for quantitative variables between and among groups. In correlation and regression we assessed and used patterns between quantitative variables. For all of these tests, means and standard deviations can be computed and used to summarize the distribution of the quantitative variable(s). However, some hypotheses are simply focused on comparing counts for qualitative variables or quantitative variables measured on the ordinal scale and thus, do not include data which fit these parametric tests. When this occurs, non parametric test are needed.

**Chi-squared** tests are non-parametric tests used to compare the counts of subgroups for data measured on the nominal or ordinal scales of measurement. For this chapter, we will focus on two versions of chi-squared:

1. The Chi-Squared Goodness of Fit test and
2. Chi-Squared Test of Independence.

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