

CHAPTER OVERVIEW

11: Chi-Square Tests and F-Tests

In previous chapters you saw how to test hypotheses concerning population means and population proportions. The idea of testing hypotheses can be extended to many other situations that involve different parameters and use different test statistics. Whereas the standardized test statistics that appeared in earlier chapters followed either a normal or Student t-distribution, in this chapter the tests will involve two other very common and useful distributions, the chi-square and the F-distributions. The chi-square distribution arises in tests of hypotheses concerning the independence of two random variables and concerning whether a discrete random variable follows a specified distribution. The F-distribution arises in tests of hypotheses concerning whether or not two population variances are equal and concerning whether or not three or more population means are equal.

[11.1: Chi-Square Tests for Independence](#)

[11.2: Chi-Square One-Sample Goodness-of-Fit Tests](#)

[11.3: F-tests for Equality of Two Variances](#)

[11.4: F-Tests in One-Way ANOVA](#)

[11.E: Chi-Square Tests and F-Tests \(Exercises\)](#)

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