SUMMARY

1. Chi-square, *t*-test, and ANOVA are statistical tests of difference.

2. The function of inferential statistics is to draw conclusions about a population by examining the sample.

3. Inferential statistics rely on several assumptions: the use of probability in establishing significance levels, normal distribution of populations and samples, and random assignment of participants to groups.

4. Meeting these assumptions may not always be possible; thus, some scholars use these tests of differences outside the experimental design framework.

5. Four analytical steps assist the researcher through statistical interpretation of tests of differences: (1) conducting the statistical test to determine if differences exist; (2) characterizing the differences found as expected or not expected; (3) assessing differences for statistical significance; and (4) interpreting differences found with respect to the population from which the sample was drawn.

6. A one-way chi-square looks for statistically significant differences in categories within one nominal variable; contingency analysis looks for categorical differences between two or more nominal variables.

7. The *t*-test is used to test hypotheses that expect to find a difference between two groupings of the independent variable on a continuous level dependent variable.

8. A *t*-test can be two-tailed, in which any difference found is accepted, or one-tailed, in which the direction of the difference is specified by the research question or hypothesis.

9. Analysis of variance, or ANOVA, compares the influence of two or more groups of the independent variable on the dependent variable.

10. Design issues to consider in using ANOVA include planned or post hoc comparisons, and between-subjects and within-subject forms.

11. A one-way ANOVA tests for significant differences in the continuous level dependent variable based on categorical differences of one independent variable.

12. A two-way ANOVA tests for the effects of two categorical independent variables on a continuous level dependent variable.

13. Both main effects and interaction effects are possible in a two-way ANOVA.

14. Factorial ANOVA can accommodate three or four independent variables.

KEY TERMS

See the website www.mhhe.com/keyton4 that accompanies this text. For each chapter, the site contains a:

- chapter outline
- chapter checklist
- chapter summary
- short multiple-choice quiz
- PowerPoint presentation created by Dr. Keyton

For a list of internet resources, visit http://www.joannkeyton.com/CommunicationResearch-Methods.htm.