

## EXERCISE 9.2 Attitudes toward Corporal Punishment: Are Men and Women Different?

### Scenario

A child care organization commissioned a random survey to identify attitudes toward child-raising. A topic of interest was the difference between the beliefs of men and women regarding discipline. The follow table reports data on men's and women's attitudes toward spanking.

**Attitudes toward Spanking by Respondent Gender**

Favor Spanking	Male	Female
Strongly	115	107
Somewhat	212	221
Oppose	73	109
Strongly oppose	18	42

Chi-square = 13.1, degrees of freedom = 3, significance = 0.004.

### Section A: Getting Started

1. State the alternative hypothesis and the null hypothesis that could be tested with the data in this table.
2. Identify the independent and the dependent variables.
3. Calculate percentages and include in them in a table. Write a sentence to describe the relationship shown in the table. Do the data in the table support or contradict your hypothesis? Explain.
4. Based on the chi-square evidence what would you do, that is, would you reject the null hypothesis?

## EXERCISE 9.3 What Is Going On in the Schools?

### Scenario

A community action group has heard complaints that African American and Hispanic students are more likely to be suspended (either in-school or out-of-school) than other students. The superintendent of schools offers to review the files of students in grades 9–12. The school system has 39,000 students in grades 9–12: 58 percent African American, 12 percent Hispanic, and 25 percent White.

### Section A: Getting Started

1. What target population would you recommend the superintendent use? Why did you recommend this population? (Note that target population refers to the specific population that the data will represent.)
2. State the alternative hypothesis and the null hypothesis the superintendent should test.
3. If the superintendent tests the hypothesis and makes a Type I error, explain what has happened.
4. If the superintendent tests the hypothesis and makes a Type II error, explain what has happened.
5. Should the superintendent be more concerned about a Type I error or a Type II error? Justify your answer.
6. The superintendent originally set  $\alpha = 0.05$ . How can she further decrease the probability of a Type I error? How can she further decrease the probability of a Type II error?