

6

Creating Effective Charts

SUGGESTED COURSE EXTENSIONS

■ A. REVIEWING

1. In a journal article from your field,
 - a. Find a chart that presents the relationship between two variables. Use table 6.1 in *Writing about Multivariate Analysis* (pp. 150–154) to assess whether that type of chart is appropriate for the types of variables involved.
 - b. Evaluate whether you can understand the meaning of the numbers in the chart based only on the information in the chart. Suggest ways to improve labeling and layout.
 - c. Using information in the article, revise the table to correct those errors.
 - d. Consider whether a different chart format would be more effective.
 - e. Pick a table from the article. Draft a chart to present the same information, including complete title, axis labels, legend, and notes.
2. Repeat questions A.1a through A.1d with a chart that portrays the relationship among three variables (e.g., two independent variables and a dependent variable).

■ B. APPLYING STATISTICS

1. Create a chart to show the frequency distribution of a variable from your data set. See table 6.1 in *Writing about Multivariate Analysis* (pp. 150–154) to decide on the best format of chart for the type of variable.
2. Estimate a difference in means for a continuous dependent variable according to values of a categorical independent variable. Create a chart to present the results, using the checklist in chapter 6 of *Writing about Multivariate Analysis*.
3. Estimate a logistic regression model of a binary dependent variable as a function of three or four dummy variables. Using the criteria on pages 140–141 of *Writing about Multivariate Analysis*, create a chart to show the 95% confidence intervals around the log-odds estimate for each of the independent variables, including a reference line to convey the null hypothesis.

4. Complete questions B.2b, B.4c, and B.5c in the suggested course extensions for chapter 9 (pages 66–67) of the *Study Guide to Writing about Multivariate Analysis*.
5. Obtain a copy of the instructions for authors for a leading journal in your field. Revise the charts you created in questions B.1 through B.3 to satisfy their criteria.

■ C. WRITING AND REVISING

1. Evaluate a chart you created previously for a paper about a multivariate analysis, using the checklist for chapter 6 in *Writing about Multivariate Analysis* and the instructions for authors for your selected journal.
2. Peer-edit another student's charts after he or she has revised them, again using the checklist and the instructions for authors for their selected journal.
3. Read through a results section you have written previously. Identify topics or statistics for which to create additional charts such as net effects of interactions or multiterm specifications from your multivariate model. Draft them using pencil and paper, including complete title, labels, legend, and notes.
4. Identify a table or portion of a table in your paper that would be more effective as a chart. Draft that chart, including complete title, labels, legend, and notes.