Chapter 9: Presenting Your Data

This chapter discusses methods for presenting your data and findings in your reports. Most of this chapter is devoted to introducing you to methods for creating and editing charts. Then, we review ways to edit the tabular output from the various statistical procedures so that you convey just the information you need. Finally, we show you how to copy your work from the SPSS output screen into a word-processing document (i.e. Microsoft Word).

Charts

Deciding on a Chart Type

Charting a Single Variable: DEGREE

First, let's decide how we might display education as measured by DEGREE. Click on **Graphs**, then **Gallery**. The Chart Gallery is a guide that SPSS 13 provides to help you to decide which type of chart fits your needs, and to show you the steps for obtaining the chart you choose. The Chart Gallery box is shown in Figure 9-1. Point your mouse over some of the icons to see the names of the different chart types. It looks like a Bar Chart would be a good way to display DEGREE. Click on **Bar** in the Chart Gallery (the first icon on the left side),. You will see a window that looks like the one in Figure 9-2.

Click on the icon labeled **Simple** to see some examples of bar charts (see Figure 9-3). Since we are displaying only one variable, it looks like Chart A, "Summaries for Groups of Cases," is the best choice. It shows the number of cases which fall into each category (i.e. DEGREE value).

Scroll down to the descriptions of each chart type, and click the **How To** link under the title "A. Summaries for Groups of Cases." Here, you will see the steps to follow to create this type of chart (see Figure 9-4).

Creating Your Chart

Lets go through the steps in Figure 9-4. On the SPSS Data Editor menu bar, click on **Graphs**, then **Bar**. You will see the box shown in Figure 9-5.

You can see that **Simple** is already selected, because it has a black box around it. "Summaries for groups of cases" is also already selected. So, click on **Define** so that you can tell SPSS which variable you want to show in your chart. Find DEGREE in the list of variables on the left, then click the arrow below **Category Axis** to enter degree into the box. See Figure 9-6 to see how it should look. (Note: In this exercise, you are going to create a chart that shows the number

of respondents in each category. If you preferred to show the percentage of respondents, you would click on "% of cases" in the **Bars Represent** section.)

Click **OK** to create the chart. Your chart should look like the one in Figure 9-7.

You may make changes to the way your chart looks by opening it in its own window. Double-click anywhere in the chart, and it open in the Chart Editor. Explore the menus in the Chart Editor to experiment with what you can do. Try this: click on **Options**, then **Title**.   Two things will happen.   The Properties dialog box will appear [see Figure 9-8), and you will also see the word "Title" contained in an outlined box at the top of your chart (see Figure 9-9). Simply type in the title you want for your chart. If you would like to change the font or the text color used for your chart title, do that in the Properties box.   If you choose something other than the default, click **Apply**, then close the box by clicking on the **X** in the upper-right corner. If you are happy with the default, just close the box.

We could have chosen other chart types to display the data in the DEGREE variable. Experiment with some of the other chart types. You may want to explore the definitions of other charts in the Chart Gallery.

Charting Several Variables: Abortion Attitudes

When you are working with several related variables, you may want to show them in one chart, rather than having separate charts for each. Let's show how responses to the questions about abortion attitudes vary with the condition under which abortion would be allowed. Let's also make it more interesting by showing the similarities and differences in men's and women's attitudes.

To obtain this chart, click on **Graphs**, then **Bar**. When the dialog box opens, click on **Clustered**. Doing this will "cluster" the data by respondents' gender. In the lower section, click on **Summaries of Separate Variables**. This will allow you to show the results for all of the 'abortion attitude' variables. The dialog box should look like the one in Figure 9-10 Click **Define**.

A dialog box for entering your variables opens once you click Define. Move each of the 'abortion attitude' variables into the larger box (the one labeled "Bars Represent." The order you add them into the box will determine the order they will print out in the chart. You may want to enter them in the following order ABHLTH, ABRAPE, ABDEFECT, ABNOMORE, ABPOOR, ABSINGLE, ABANY Then, click on SEX, and move it into the space labeled Category Axis. At this point, your dialog box should look like the one shown in Figure 9-11.

Notice that in the dialog box, the attitude variables are preceded with Mean. This tells you that the default is for the bars to represent the mean of each variable. If we were charting interval or ratio variables, such as education or income, this would make sense. However, the possible meaningful responses to the abortion questions are "yes" and "no." It seems that reporting the percentage who answered "yes" would convey the information much more meaningfully. Do this by using the Change Statistic button. First, click on all of the abortion variables to highlight them (you will need to hold down the Shift key while you do this). Then, click the **Change Statistic** button.

The dialog box that opens gives you several choices about how you want your data to be summarized and displayed. Recall that for the abortion variables, a "Yes" response was coded as 1, and "No" was coded as 2. (If you aren't sure how variable categories were coded, just look at the labels in the "Variable View.") We can tell SPSS to display the percent who said "Yes" by clicking on Percent below, and entering the number 2 in the Value box. This way, only those responses coded with a value lower than 2 will be charted, which in this case, are the "Yes" responses. When you finish, your dialog box should look like the one in Figure 9-12. Click **Continue**, then **OK**. Your chart should look like the one shown in Figure 9-13.

Tables

Let's create a crosstabulation of SEX and FEAR. Click on **Analyze**, then **Descriptive Statistics**, then **Crosstabs**. Put FEAR in the row box and SEX in the column box (recall that in crosstabulations, the independent variable always goes in the column position). Now click on **Cells** and select **column** in the Percentages box, and then click on **Continue,** then **OK**. The Output Window will appear, and your screen should look like Figure 9•14.

The left•hand frame will contain an outline of the tables in the right•hand frame. Click on **FEAR AFRAID TO WALK AT NIGHT IN NEIGHBORHOOD * SEX RESPONDENTS SEX Crosstabulation**. This will select that table in the right•hand frame. The red arrow to the left of the table indicates that it has been selected. Double click anywhere inside the selected table. The border of the table will change and it will have a series of cross•hatches on it. You can now edit the table. Let's say you want to change the title. Point your mouse at the title and click once. This highlights the title (see Figure 9•15).

You can now edit the title. Delete the old title, and type in: "Table 1: Crosstabulation of Fear of Walking at Night, by Gender," then click anywhere in the table (outside of the title). You can click in any area of the table, and make changes. By clicking in the various cells and deleting and/

or editing contents, you can simplify the table so that it looks like the one shown in Figure 9-16. You can also use the toolbar that appeared when you double clicked the table to change fonts, etc. If you do not want to make changes using the toolbar, simple close that box.

Copying and Pasting Charts and Tables to a Document

Since you will probably be using a word processing program to prepare the report of your results, it will be useful to copy your charts and tables from SPSS into your word-processing document. Let's start with the table we just created. There are two ways to do this. The simplest way is to click on the table using the <u>right</u> mouse button. A small menu will appear; click on Copy object. Then, go to your word-processing document, and right-click where you want the table to appear. The small menu will appear again; click Paste.

The second way to copy the table is by using the menu commands. Make sure the table you want is selected (you will see the red arrow pointing to it, and the table will have an outline around it). Click on **Edit** on the menu bar, then click on **Copy Objects**. Switch over to your word-processing document. Click the mouse where you want to paste your table. Click on **Paste Special** and then **OK**.

The method for copying and pasting charts is exactly the same as the method as for copying and pasting tables. Note that in both cases, what you are pasting into your word processing document is an object: a graphic (or picture). This means that you can resize it to make it bigger or smaller, but you cannot edit it.

Chapter Nine Exercises

1. Make a bar chart of TRUST. Then, edit the chart by giving it a proper title. Copy and paste the chart into a word processing file. Write a few sentences that describe the pattern shown in the chart.

2. Are happily married people more trusting? Create a "clustered" bar chart which shows levels of TRUST grouped by HAPMAR (hint: the HAPMAR categories should appear along the x-axis, and the TRUST categories should appear in the legend). This time, have the bars show the percentages of respondents in each category, rather than the number (so, click on "% of cases" in the "Bars Represent" section of the dialog box). Show the % represented by each bar, and make sure the chart is properly titled and labeled. Copy and paste the chart into a word processing file. Write a few sentences that describe the patterns

shown in the chart.

3. Do a cross-tabulation of HAPMAR and TRUST. Since HAPMAR is the independent variable, place it in the column location, and show column percentages (see Chapter 5 for a review). Be sure that your table is properly titled. Copy and paste the table into a word processing file. Write a few sentences that discusses the relationship of the information shown in the table to the information shown in the chart you created for Question 2.