

Chapter 5 “Dealing With Data” SPSS Tutorial

1. **Visit** the student website at for this textbook at www.clowjames.net/students.

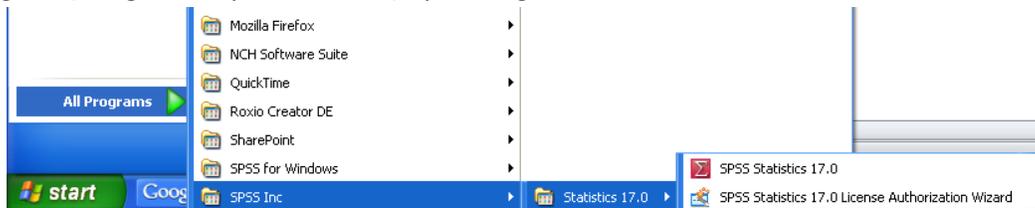
2. **Download** the following files:

“Chapter 05 Dealing with Data” (SPSS data file)

“Chapter 02 Dealing with Data Variables” (Word file)

3. Open SPSS 17.0.

The program may appear as an icon on your computer desktop, or you may need to use the START > ALL PROGRAMS command in Windows to find the “SPSS Inc.” folder. Once you have located this folder, open it, then open the “Statistics 17.0” folder. Finally, launch the SPSS Statistics 17.0 program (designated by the red icon) by clicking on that item.



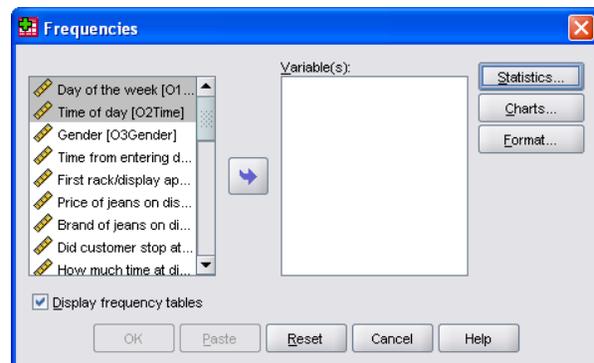
4. Select the “Open an existing data source” option from the resulting pop-up window to open the data file named, “Chapter 05 Dealing with Data”. If the file name does not appear in the window below this option, select the “More Files” option, then click the OK button, and browse to the location where your copy of the data file is saved. (If you have forgotten how to locate and open an SPSS data file, review the Dealing With Data instructions from chapter 2.)

Creating Frequency Counts

5. From the top menu bar in SPSS, select ANALYZE > DESCRIPTIVE STATISTICS > FREQUENCIES.

The pop-up box shown at right will appear.

6. From the left-hand box of variables, highlight the variable or variables for which you want frequency counts / tables.

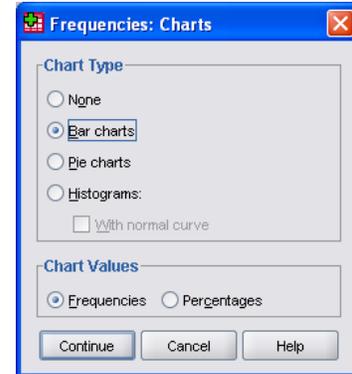


7. Then click the arrow button to move the variable(s) to the VARIABLE box on the right hand side of the Frequencies pop-up box. To select multiple variables at one time, hold down the CTRL button when clicking. Make certain the box next to “Display frequency tables” on the left-hand side of the window is checked.

Creating Bar Charts from Frequencies

NOTE: Extensive help on creating and editing charts is available in the SPSS Tutorial under the “Creating and Editing Charts” section.

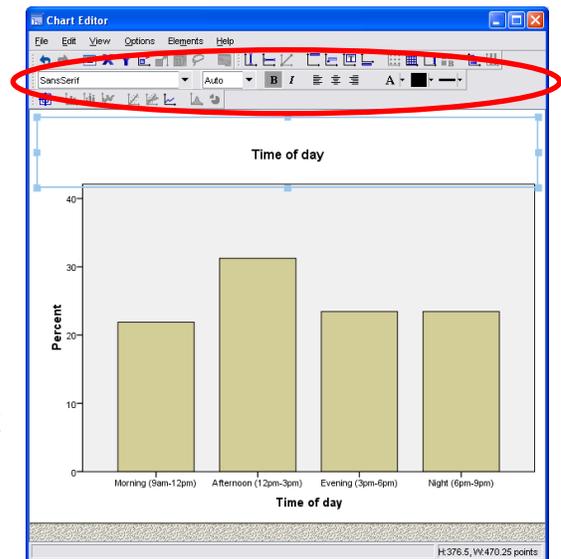
8. Before clicking the OK button in the FREQUENCIES window, click the CHARTS button. The “Frequencies: Chart” window will appear.
9. Select “Bar Charts” under the CHART TYPE section.
10. The chart will default to “Frequencies”, which are counts of variable categories. Click the “Percentages” option instead as counts often exaggerate the differences between categories.
11. Click “Continue”. Then click “OK”. Your frequency table(s) will appear in a new window called “Output1” in the SPSS Statistics Viewer.



Editing Bar Charts

NOTE: The following example uses a DIFFERENT variable than that which you were assigned. Apply the PROCESS discussed below to your own assignment.

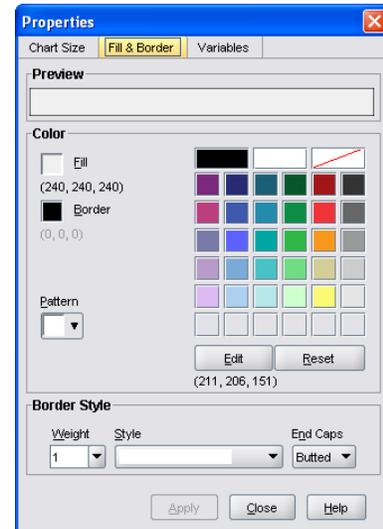
12. Go to the OUTPUT file. Double click on the chart you want to edit. This will bring up the CHART EDITOR function. In the example at right, the variable *Time of Day* (that shoppers were observed at the store) is being analyzed.
13. The words above the chart list the variable label that was defined in the variable view. Clicking ONCE on this word block allows you to edit the words shown. You will often need to expand this information to better represent the data.



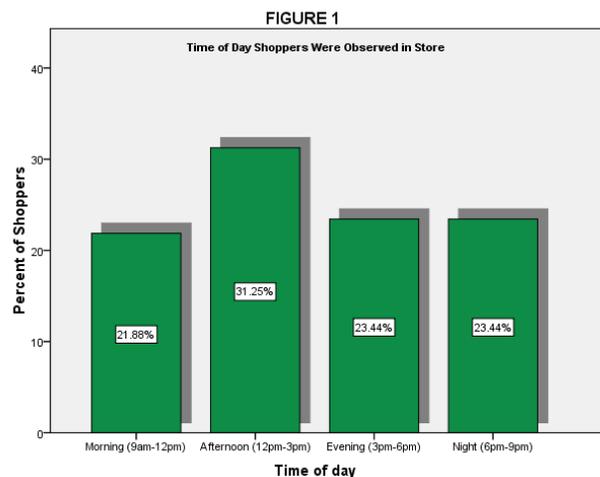
For example, only the variable label, “Time of day” appears as the original chart title. To enhance the clarity of the data being presented, this label was changed in the chart to read, “Time of Day Shoppers Were Observed in the Store”.

14. Notice that the options in the second row of icons at the top of the chart editor (highlighted by a red circle) also allow you to change the font family, size, style, and color of the text. These changes can only be made when the entire text box is selected and are not available when you are changing the words themselves. You’ll know when you can change the size, color, etc. because the text box will appear to be surrounded by a blue box with handles.

15. A chart title which will appear above the variable label can be added by selecting **OPTIONS > TITLE** from the menu at the top of the chart editor. This can be useful when labeling charts with titles such as “Percent of Shoppers by Time of Day”, “Figure 1” or “Appendix A”.
16. The vertical and horizontal chart labels can also be altered. In the example that will be followed, the vertical label of “Percent” was changed to read “Percent of Shoppers”, again for the purpose of enhancing chart clarity. Simply clicking on this label allows the text to be edited in a manner similar to that previously discussed.
17. Clicking on the box containing the bars in the bar graph brings up the **PROPERTIES** box shown at right. The tabs that are available in the **PROPERTIES** box change depending upon the element of the chart that you are editing.
18. **FILL** color refers to the background behind the bars, and can be changed to any of the colors shown. Alternately, choosing the white box with the red slash will remove a fill color so the background of the document shows through instead.
19. Clicking any of the bar graphs brings up additional property tabs not shown at right. The color of the bar graphs can be changed similar to the background. **BAR OPTIONS** can be used to change the width of the bars, and 3-D or Shadowing effects can be chosen from the **DEPTH AND ANGLE** tab.



20. A final enhancement that is **STRONGLY** recommended is to add data labels, which (in the example below) list the exact percentages of shoppers who were observed at various times of the day. To activate data labels, choose **ELEMENTS > SHOW DATA LABELS** from the top menu of the chart editor. Notice that a new tab appears in the properties box which allows control over the label position and display options.
21. When finished editing the chart, use the **FILE > CLOSE** command in the Chart Editor to return to the SPSS Output document. The edited chart will now appear in place of the original chart. The chart created for the variable in this example is shown at left.
22. Click once on the graph to select it, then **RIGHT-CLICK** and select the “Copy” option.

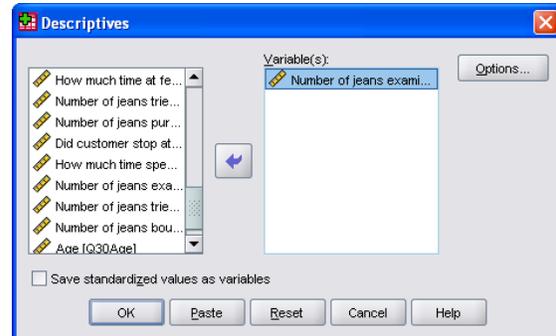


23. Open a new document in Microsoft Word. Select **PASTE** to transfer the graph to Word. This would also be a good time to save your output so that you don’t lose all of your work.

Calculating Means

24. Switch away from the OUTPUT document and go back to the main SPSS window displaying the Chapter 05 Dealing with Data.sav file. It won't matter whether you are in the DATA view or VARIABLE VIEW.

25. Use the ANALYZE > DESCRIPTIVES command to launch the DESCRIPTIVE window. Select the variables for which you would like to compute means in the same manner described earlier when selecting variables for frequency analysis.



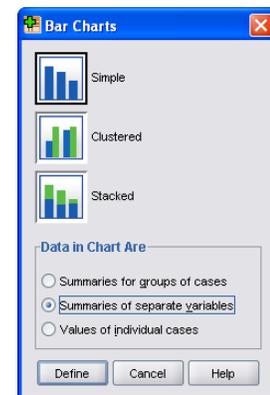
26. Once ALL of the variables are shown in the "Variable" portion of the Descriptives pop-up window, click the OPTIONS button.

27. The "Descriptives: Options" pop-up window will appear. Note that in addition to the MEAN, you can also select SUM and various measures of dispersion. For this assignment, simply select MEAN, then click OK.

28. If you haven't closed your OUTPUT file, the table displaying MEANS for each of the selected values should appear.

Graphing Bar Charts of Means of Separate Variables

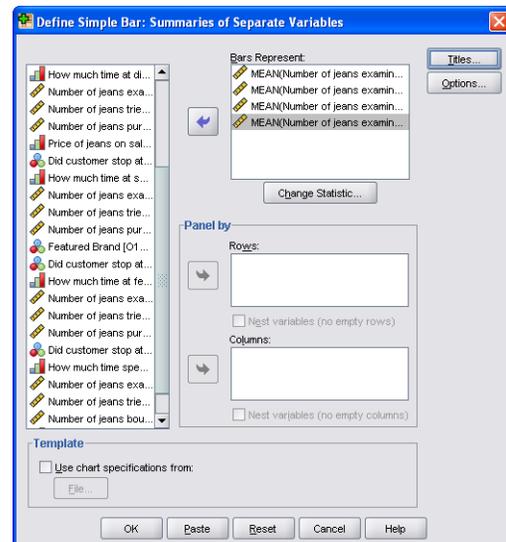
29. Return to the SPSS datafile. From the SPSS menu, select GRAPHS > LEGACY DIALOGUES > BAR. The "Bar Chart" pop-up menu will appear.



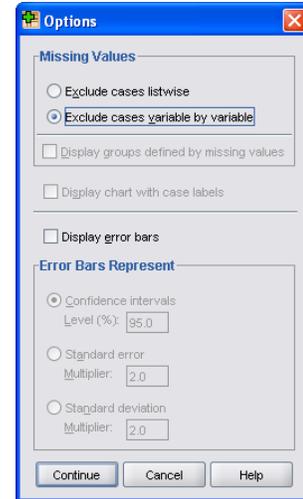
30. Select the "Simple" type of bar chart. Because the data to be graphed are contained in separate variables, select the "Summaries of separate variables" option, then click the DEFINE button.

31. The "Define Simple Bar: Summaries of Separate Variables" pop-up window will appear. Select the first four variables that you want to graph and move them under the "Bars Represent" area. Ignore the "Panel by" portion of this screen.

32. The calculation for separate variables should default to MEAN. If not, you can highlight a variable by clicking once on it, then click the CHANGE STATISTIC button, and select MEAN OF VALUES from the list.



33. Now click the OPTIONS button. When the OPTIONS window opens, select “exclude cases variable by variable” to maximize the use of your data. This option only excludes a case from the chart only for the particular variable being summarized that is missing that piece of data. Otherwise, if left at the “exclude cases listwise” default, the chart will exclude a case from the entire chart if there is missing value for ANY of the variables being charted.
34. Note that you can create the TITLE and name (second line of title) for this chart by clicking the TITLE button. Click CONTINUE and then OK.
35. Repeat this process as necessary to create all bar charts. DO NOT forget to edit the charts are previously shown; include data labels, edit the vertical chart label, the column descriptors, etc. Save your output file.



Creating Crosstab Tables

36. Return to the SPSS Data file.
37. To create a cross-tabulation table, select ANALYZE > DESCRIPTIVE STATISTICS > CROSSTABS from the SPSS menu.
38. Select the “First Rack/Display Approached” for the ROW, and “Age” for the column.
39. Click the CELLS column. Select row, column, and total percentages. Leave all other choice blank. The OBSERVED count should already be checked: leave this as is.
40. Click CONTINUE. Then Click OK. Save your Output file.

