

SPSS Tutorial

Lecture Notes

Please see the full SPSS Tutorial from SPSS Software

Introduction

Welcome to the SPSS Tutorial. This tutorial will show you how to use many of the features available in SPSS. It is designed to provide a step-by-step "hands-on" guide. All the files shown in the examples are installed with the tutorial so you can follow along, performing the same analyses and obtaining the same results shown here. (You don't have to -- but you can if want to.)

It is also designed to make it easy for you to start and stop anywhere you want. If you only want to learn about a few specific tasks, use the Contents and Index buttons (next to the Back and Next buttons) at the bottom of this window to find the information you need, or simply click the Next button (arrow pointing right) to step through all the tutorials from beginning to end.

Most of the examples presented here use the data file *demo.sav*. This data file is a fictitious survey of several thousand people, containing basic demographic and consumer information.

If you are using the Student version of SPSS, your version of the *demo.sav* is a representative sample of the original data file, reduced to meet the 1,500 case limit. Results that you obtain using that data file will differ from the results shown here.

All sample files used in these examples are located in the *tutorial/sample files* folder within the folder in which SPSS is installed.

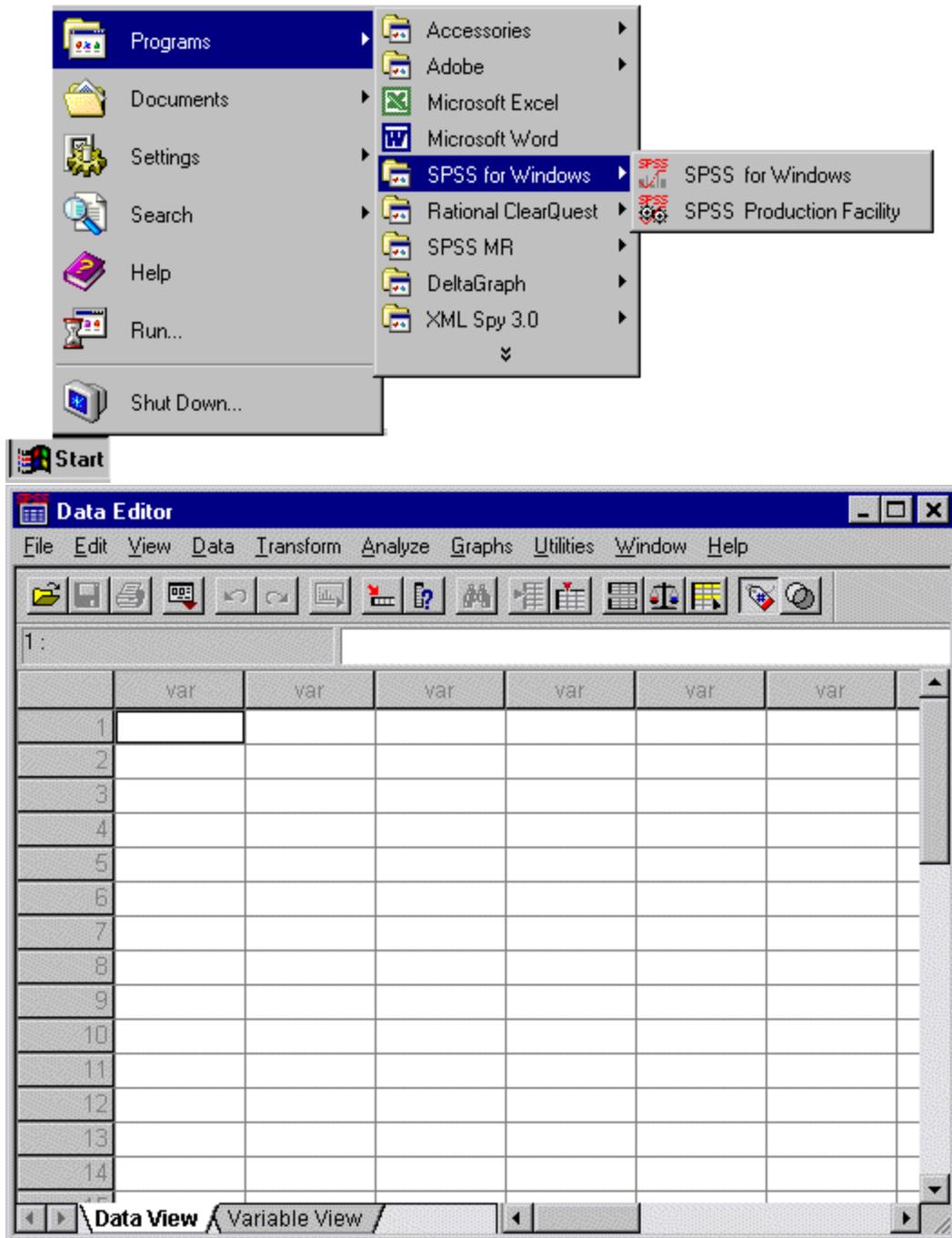
To start SPSS:

► From the **Start** menu choose:

Programs

SPSS for Windows

SPSS for Windows



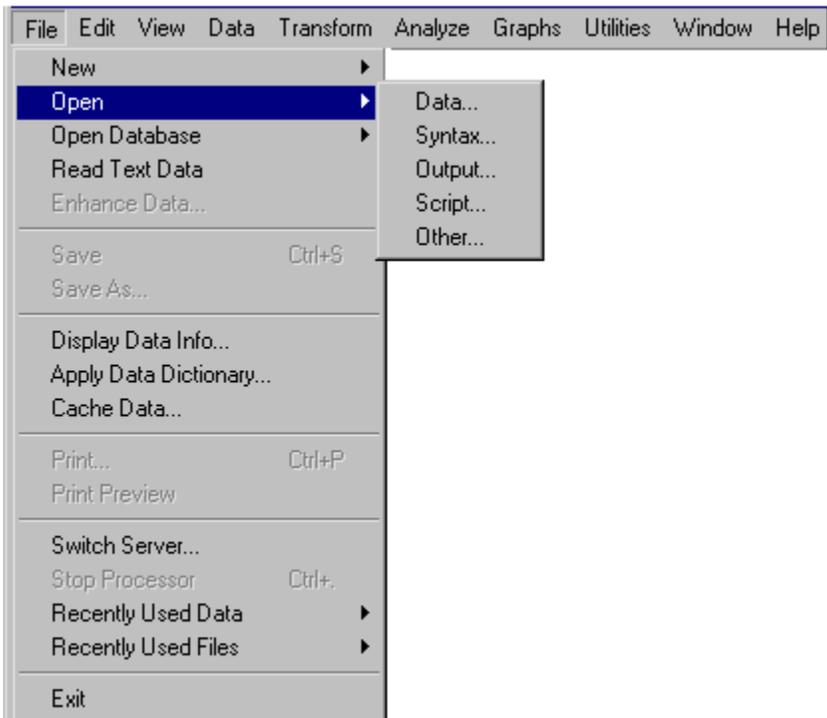
When you start a session, you see the Data Editor window.

Before you can analyze data, you need some data to analyze.

To open a data file:

- ▶ From the menus, choose:

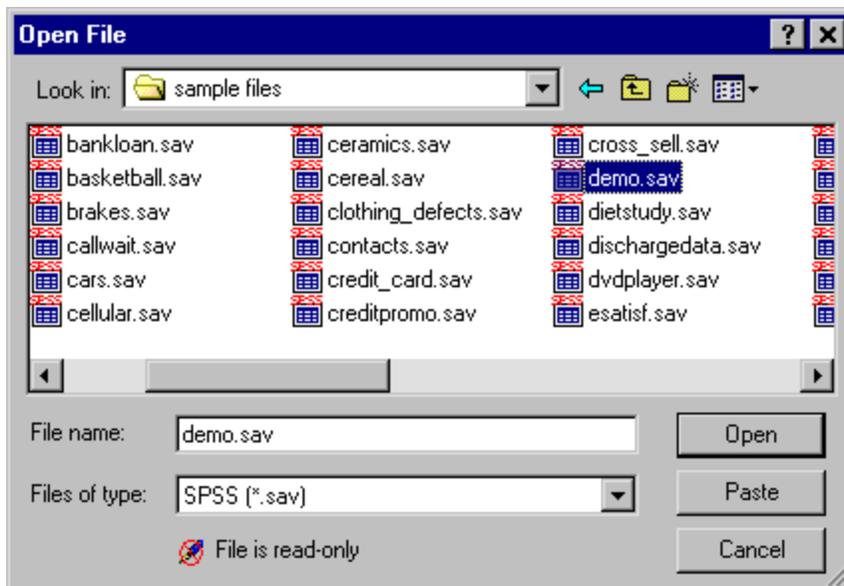
File
Open
Data



Alternatively, you can use the Open File button on the toolbar



This opens the Open File dialog box.



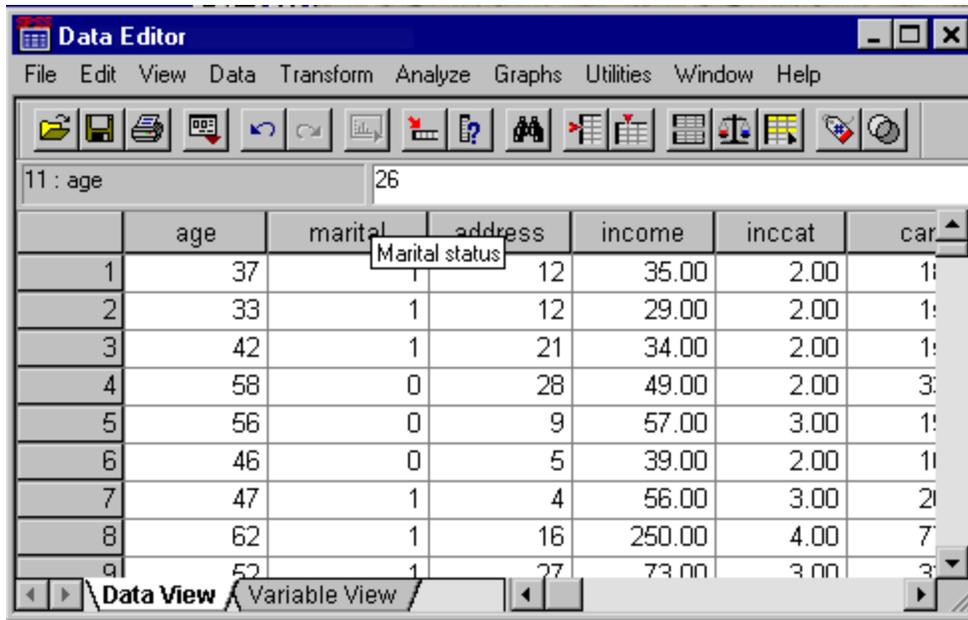
By default, SPSS-format data files (.sav extension) are displayed. You can display other file formats using the **Files of Type** drop-down list. ▶ Select a data file and click **Open**.

If you want to open the data file used in this example, demo.sav is located in *tutorial/sample files* in the directory in which SPSS is installed (usually *program files\spss*).

The data file is displayed in the Data Editor.

	age	marital	address	income	inccat	ca
13: age	33					
1	37	1	12	35.00	2.00	
2	33	1	12	29.00	2.00	
3	42	1	21	34.00	2.00	
4	58	0	28	49.00	2.00	
5	56	0	9	57.00	3.00	
6	46	0	5	39.00	2.00	
7	47	1	4	56.00	3.00	
8	62	1	16	250.00	4.00	
9	52	1	27	73.00	3.00	

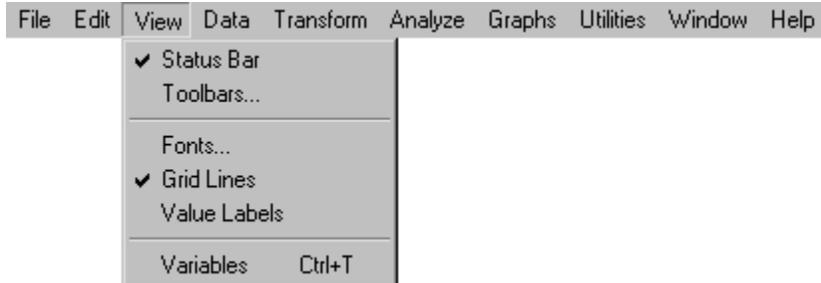
If you put the mouse cursor on a variable name (the column headings), a more descriptive variable label is displayed if one has been defined for that variable.



By default the actual data values are displayed. To display labels:

- ▶ From the menus, choose:

View Value Labels



Alternatively, you can use the Label tool on the toolbar. Descriptive value labels are now displayed. This makes it easier to interpret the responses.

11 : age 26

	age	marital	address	income	inccat	car
1	37	Married	12	35.00	\$25,00	18
2	33	Married	12	29.00	\$25,00	18
3	42	Married	21	34.00	\$25,00	18
4	58	Unmarried	28	49.00	\$25,00	33
5	56	Unmarried	9	57.00	\$50,00	18
6	46	Unmarried	5	39.00	\$25,00	18
7	47	Married	4	56.00	\$50,00	28
8	62	Married	16	250.00	\$75,00	77
9	52	Married	27	73.00	\$50,00	33

Data View Variable View

The Analyze menu contains a list of general reporting and statistical analysis categories. Most of the categories are followed by an arrow, which indicates that there are several analysis procedures available within the category; they will appear on a submenu when the category is picked.

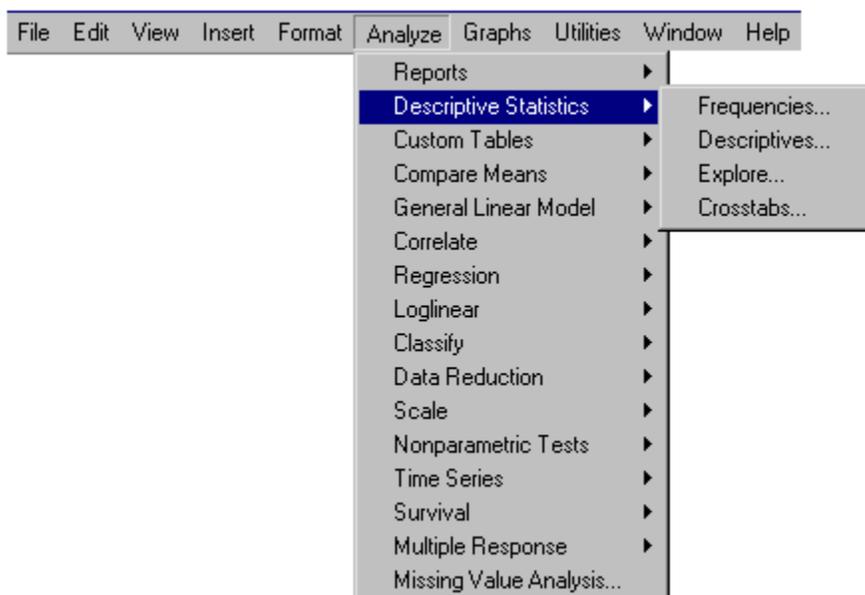
We'll start with a simple frequency table (table of counts).

From the menus choose:

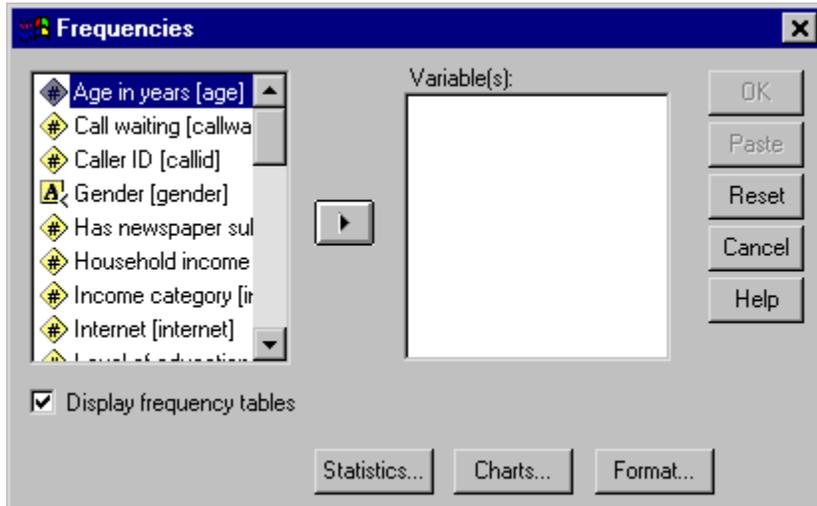
Analyze

Descriptive Statistics

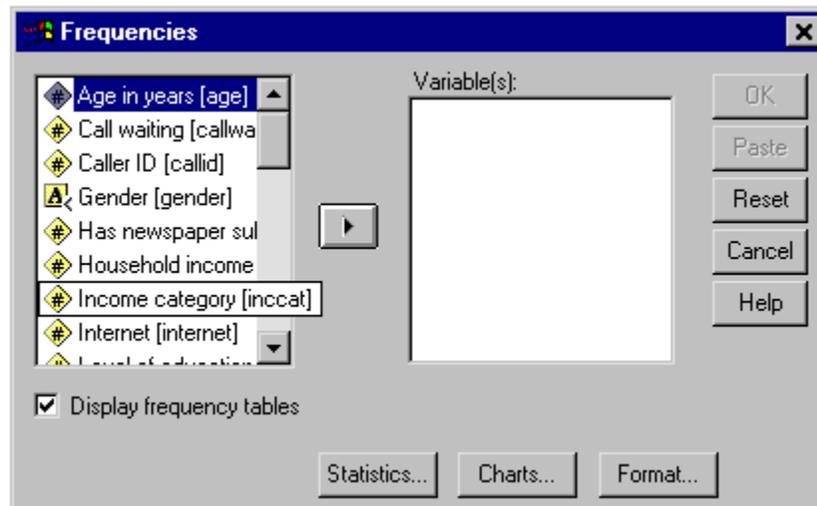
Frequencies



This opens the Frequencies dialog box.

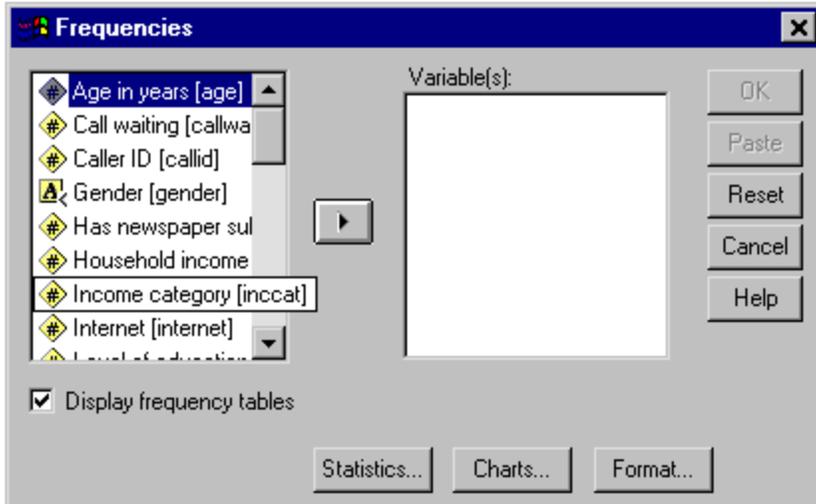


A more complete description of each variable pops up when the cursor is over it.



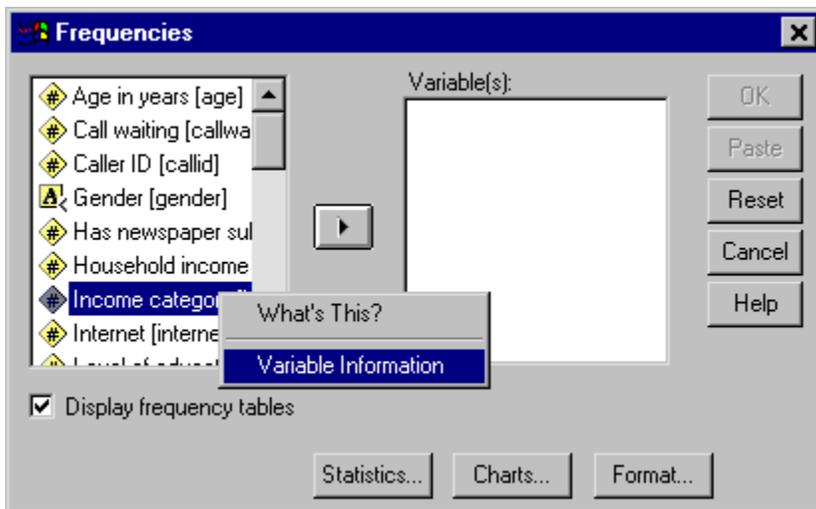
The variable name (in square brackets) is *inccat*, and it has the variable label *Income category*.

If there were no variable label, only the variable name would appear in the list box. In the dialog box, you choose the variables you want to analyze from the source list on the left, and move them into the **Variable(s)** list on the right.

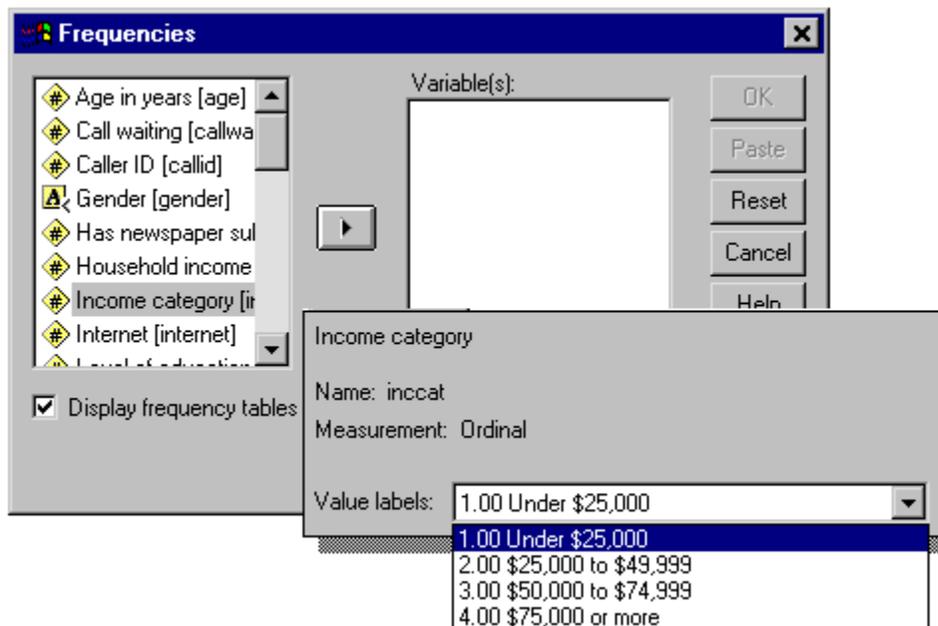
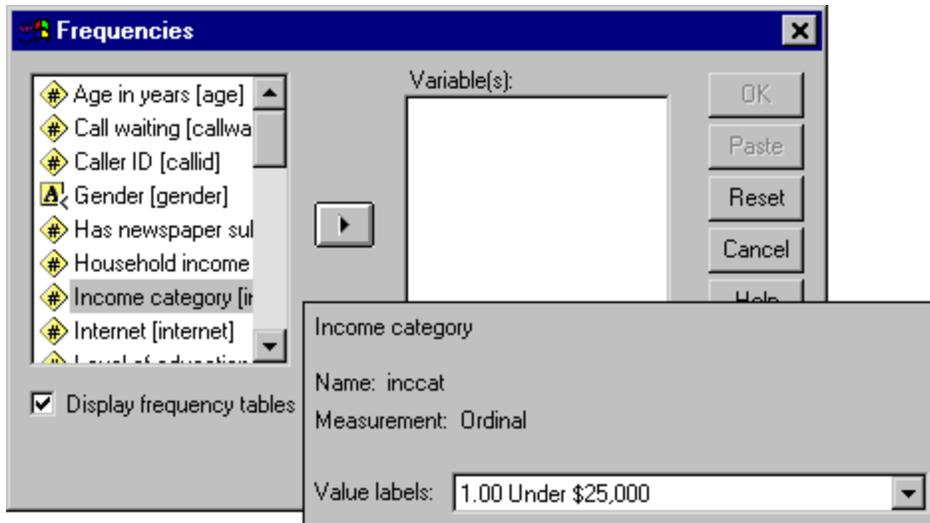


The **OK** button, which runs the analysis, is disabled until at least one variable is placed in the **Variable(s)** list. Additional labeling information can be easily obtained for any variable on the list by clicking on the variable name with the right mouse button.

- ▶ For example, you could click the right mouse button on **Income Category [inccat]**, and then click (left mouse button) **Variable Information**.

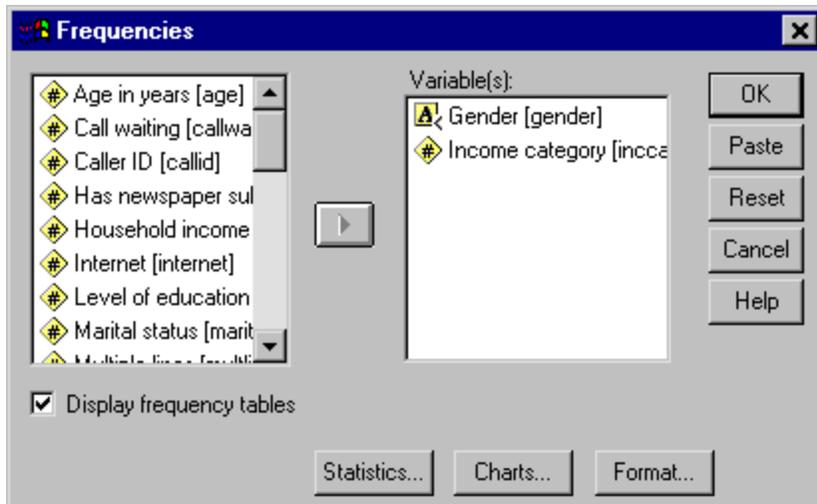


- ▶ Click the down arrow on the drop-down **Value Labels** list.



All the defined value labels for the variable are displayed.

- ▶ Click **Gender [gender]** in the source variable list, then click the right-arrow button to move the variable into the target **Variable(s)** list.



- ▶ Then click **Income category [inccat]** in the source list and click the right arrow button again.

A pound sign (#) icon next to the variable name indicates the variable is **numeric**. An icon with the letter "A" indicates the variable is a **string** (alphanumeric) variable, which may contain both letters and numbers. A less-than sign (left angle bracket) indicates the variable is a **short string**, containing 8 or less characters. Click **OK** to run the procedure.

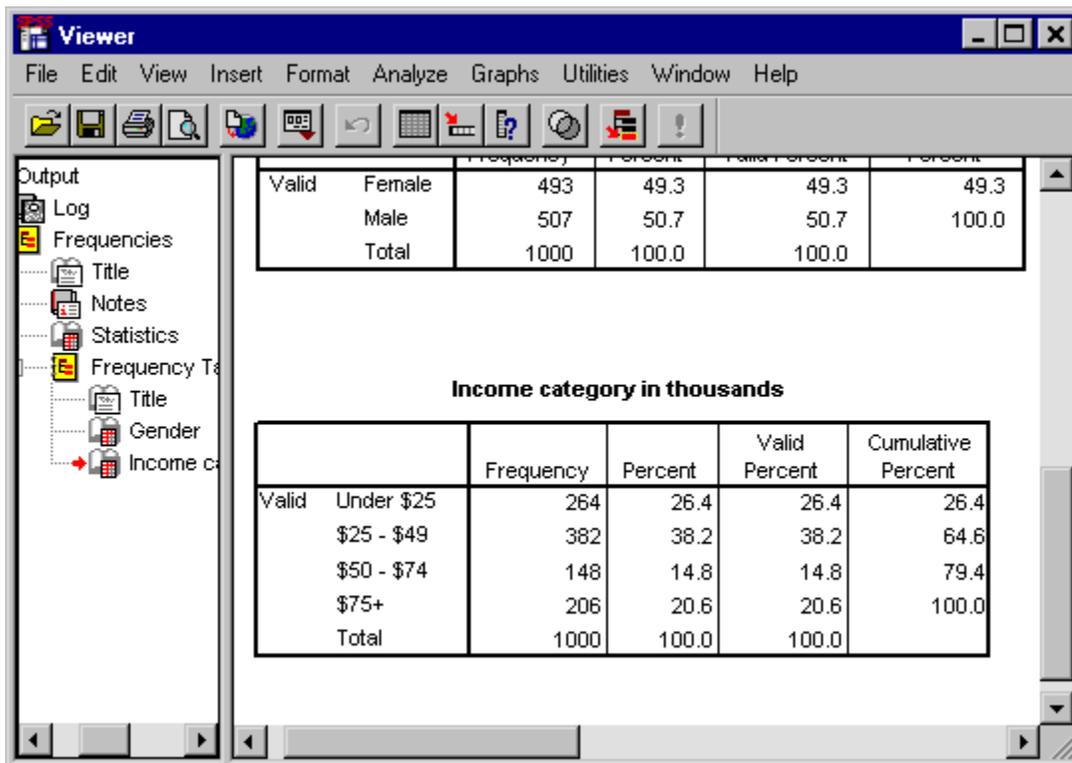
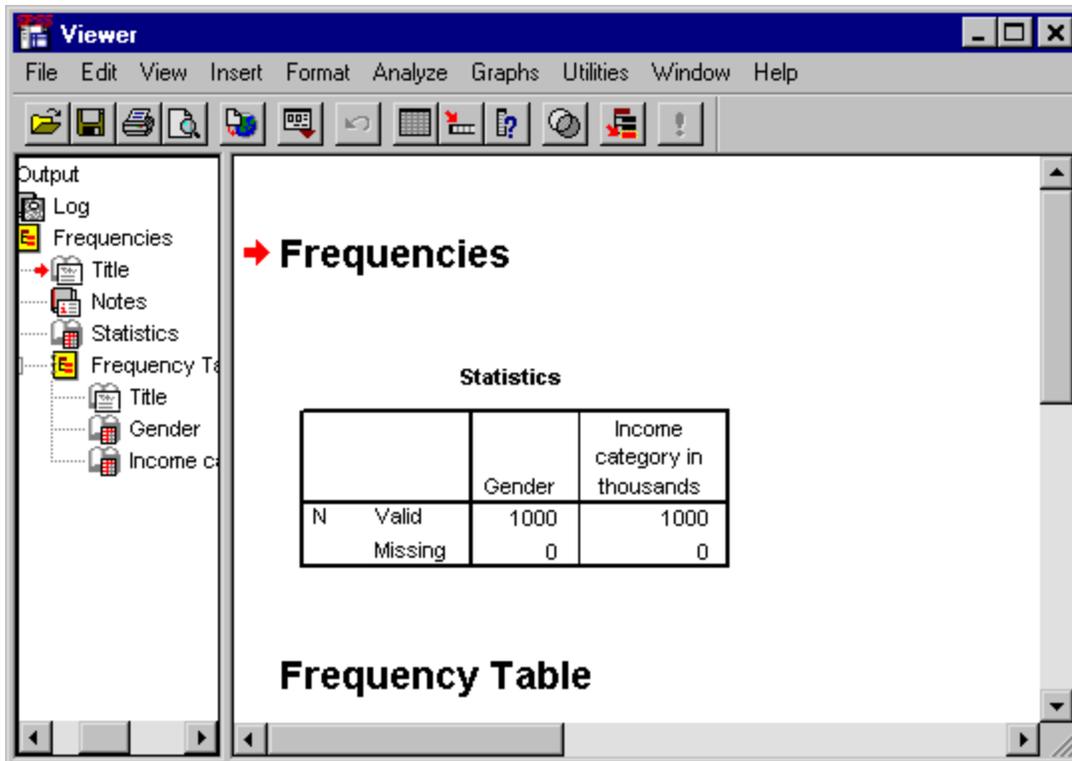
Results are displayed in the Viewer window.

You can go to any item in the Viewer quickly simply by selecting it in the outline pane.

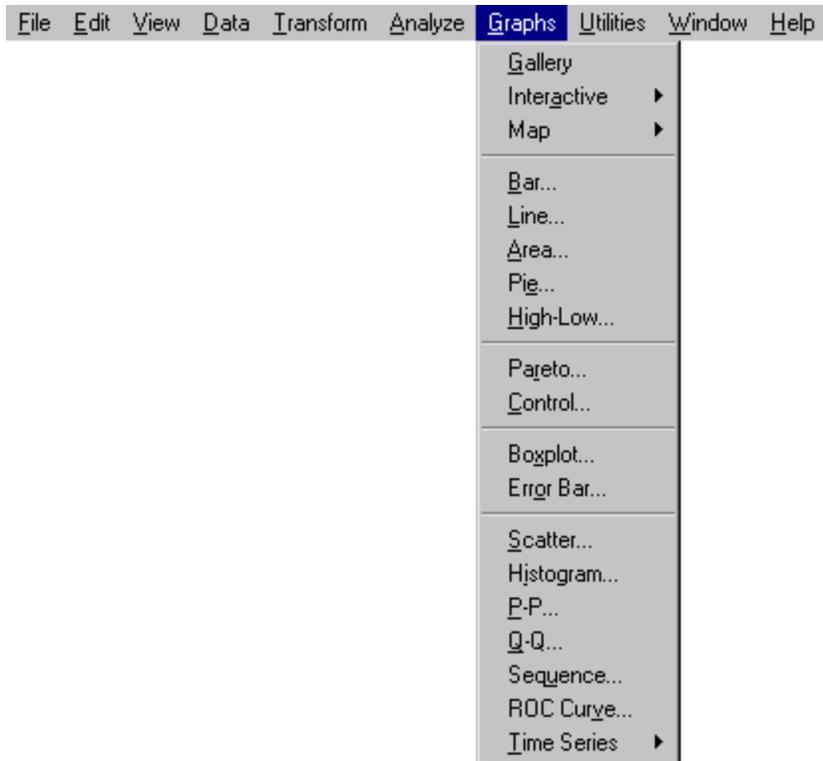
For example, you could...

- ▶ **Click** Income category.

This takes you directly to the frequency table for income categories. This frequency table shows the number and percentage of people in each income category.



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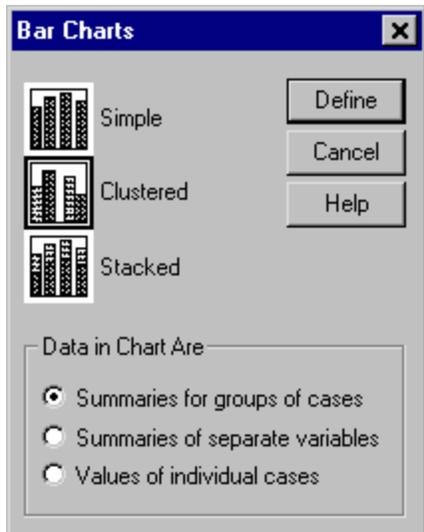
Although some statistical procedures can create high-resolution charts, you can also use the Graphs menu to create charts.

For example, you could create a chart that shows the relationship between wireless telephone service and PDA (personal digital assistant) ownership.

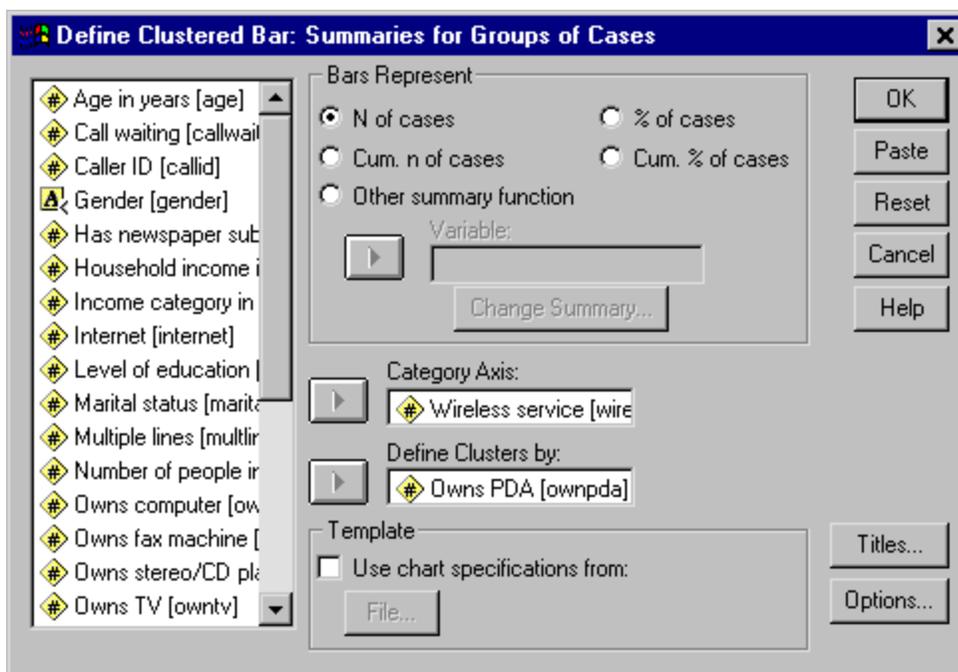
From the menus, choose:

Graphs
Bar

- ▶ Click **Clustered** and then click **OK**.

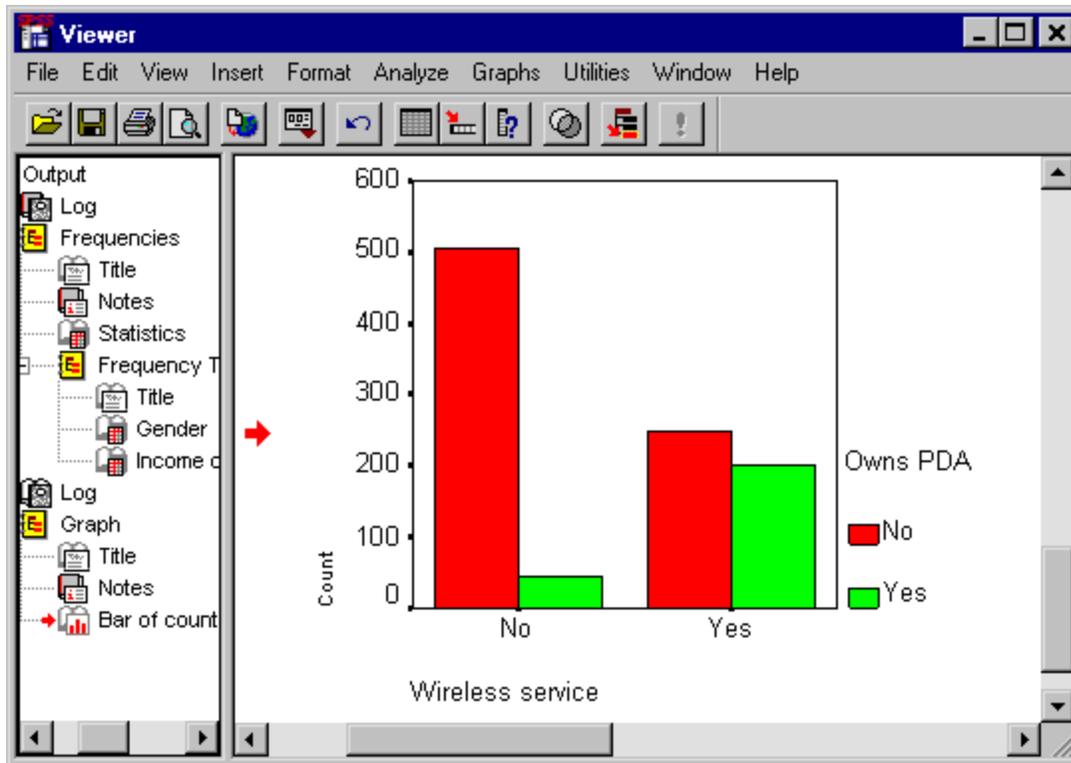


- ▶ Scroll down the source variable list and select **Wireless service [wireless]** as the **Category Axis** variable.



- ▶ Select **Owns PDA [ownpda]** as the **Define Clusters by** variable.
- ▶ Click **OK** to create the chart.

The bar chart is displayed in the Viewer. It shows that people with wireless phone service are far more likely to have PDAs than people without wireless service.



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Help is available in a number of different ways:

Help menu. Every window has a Help menu on the menu bar. The **Topics** menu item provides access to the Contents, Index, and Find tabs, which you can use to find specific Help topics. The **Tutorial** menu item provides access to the introductory tutorial.

Dialog box context menu Help. Right-click on any control in a dialog box to display a description of the control and directions for its use.

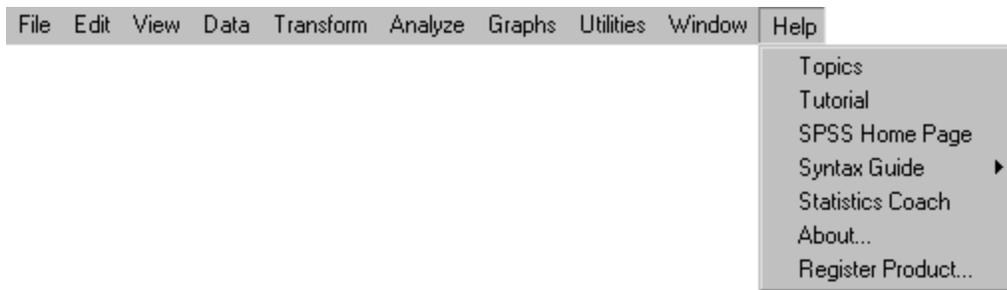
Dialog box Help buttons. Most dialog boxes have a Help button that takes you directly to a Help topic for that dialog box. The Help topic provides general information and links to related topics.

Pivot table context menu Help. Right-click on terms in an activated pivot table in the Viewer and select **What's This?** from the context menu to display definitions of the terms.

Statistics Coach. The **Statistics Coach** item on the Help menu provides a wizard-like method for finding the right statistical or charting procedure for what you want to do.

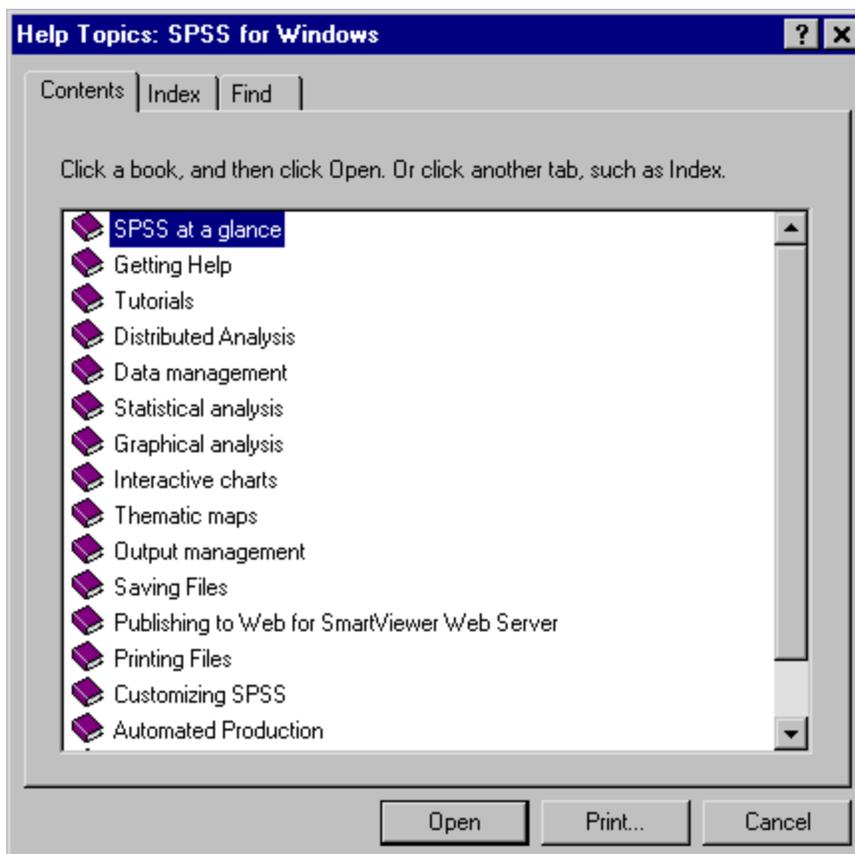
Results Coach. Right-click on a pivot table, and then select **Results Coach** from the Help menu to get information that can help you interpret your results.

This chapter uses the files [demo.sav](#) and [bhelptut.spo](#).



The **Topics** item on the help menu opens the Help Contents tab.

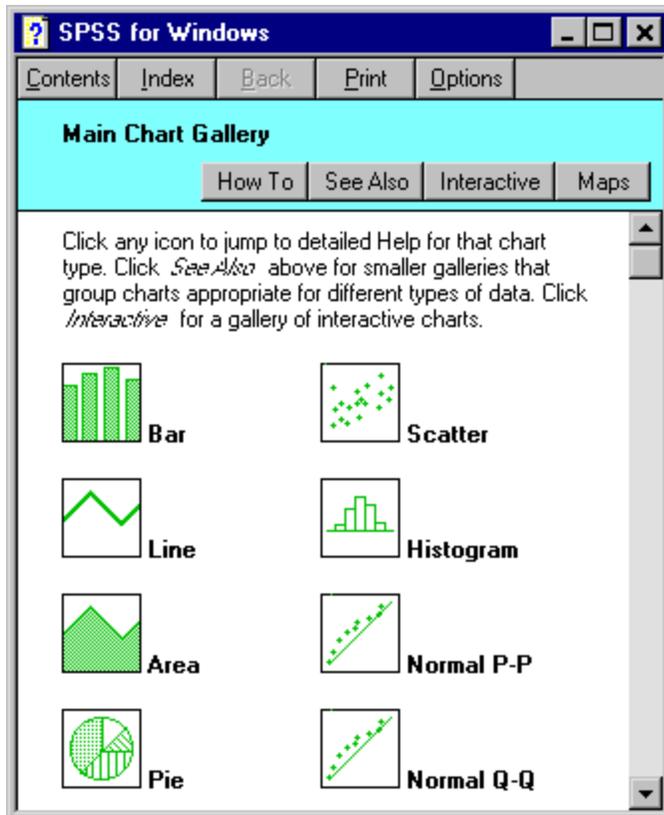
The Contents tab is an expandable and collapsible table of contents. It is most useful if you're looking for general information or are unsure what index term to use to find what you're looking for.



For example, you could...

- ▶ Double-click the closed book icon next to **Graphical Analysis**.
- ▶ Double-click the closed book icon next to **Finding the chart type you want**.
- ▶ Double-click the question mark icon next to **Gallery of all chart types**.

This opens a help topic with links to the various types of charts available.

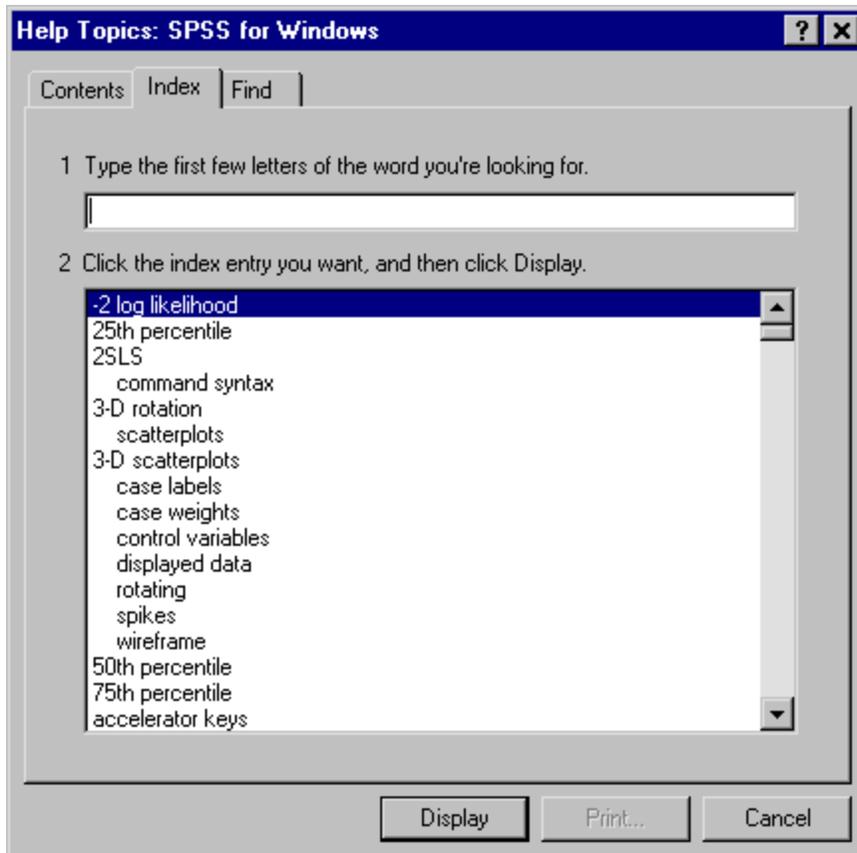


The Index tab provides a searchable index that makes it easy to find specific topics. The Index tab is organized in alphabetical order, just like a book index. It uses **incremental search** to find what you're looking for.

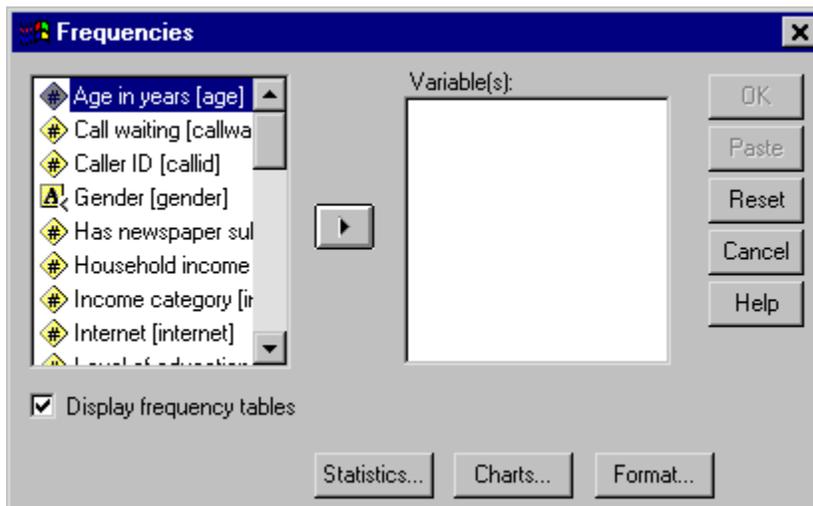
For example, if you...

► **Type med.**

The index scrolls to and highlights the first index entry that starts with those letters: **median**.



The index scrolls to and highlights the first index entry that starts with those letters: **median**



Most dialog boxes have a help button that displays a help topic about what the dialog box does and how to do it.

In this example, the help topic describes the purpose of the Frequencies procedure and provides an example.

SPSS for Windows

Contents Index Back Print Options

Frequencies

How To Syntax See Also

The Frequencies procedure provides statistics and graphical displays that are useful for describing many types of variables. For a first look at your data, the Frequencies procedure is a good place to start.

For a frequency report and bar chart, you can arrange the distinct values in ascending or descending order or order the categories by their frequencies. The frequencies report can be suppressed when a variable has many distinct values. You can label charts with frequencies (the default) or percentages.

Example. What is the distribution of a company's customers by industry type? From the output, you might learn that 37.5% of your customers are in government agencies, 24.9% in corporations, 28.1% in academic institutions, and 9.4% in the healthcare industry. For continuous, quantitative data, such as sales revenue, you might learn that the average product sale is \$3,576 with a

Help Topics: SPSS for Windows



Contents Index Find

- 1 Type the first few letters of the word you're looking for.

med

- 2 Click the index entry you want, and then click Display.

- in Frequencies
- median statistic**
- in Explore
- in Frequencies
- in Means
- in OLAP Cubes
- in Summarize
- median test
 - in Two-Independent-Samples Tests
- memory
 - allocating
 - increasing virtual memory
- menus
 - customizing
- merging data files
 - dictionary information
 - files with different cases

Display

Print...

Cancel

Help Topics: SPSS for Windows



Contents | Index | Find

Click a book, and then click Open. Or click another tab, such as Index.

-  SPSS at a glance
-  Getting Help
-  Tutorials
-  Distributed Analysis
-  Data management
-  Statistical analysis
-  Graphical analysis
-  Interactive charts
-  Output management
-  Saving Files
-  Publishing to Web for SmartViewer Web Server
-  Printing Files
-  Customizing SPSS
-  Automated Production
-  Scripting and Automation

Open

Print...

Cancel