HOW TO. . .

Use SPSS

SPSS Statistics 17.0 (SPSS), also known as PASW Statistics, is a comprehensive system for analyzing data. SPSS can take data from almost any type of file and use them to generate tabulated reports, charts, and plots of distributions and trends, descriptive statistics, and complex statistical analyses.

Opening Existing Files

1. Open SPSS. Cancel out of the opening dialog box is necessary.

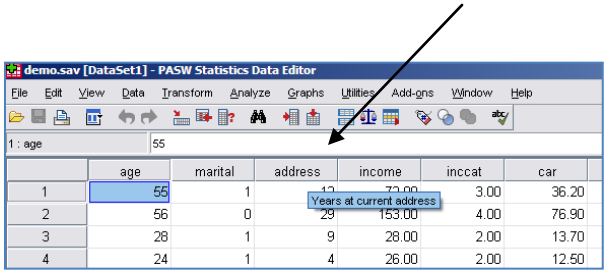
2. Click on the **File** menu. Choose **Open** and then **Data**. (You can also click the **Open data document** button on the toolbar.) 

3. Browse to the folder and locate and open an SPSS data file (.sav extension).

Viewing a Data File

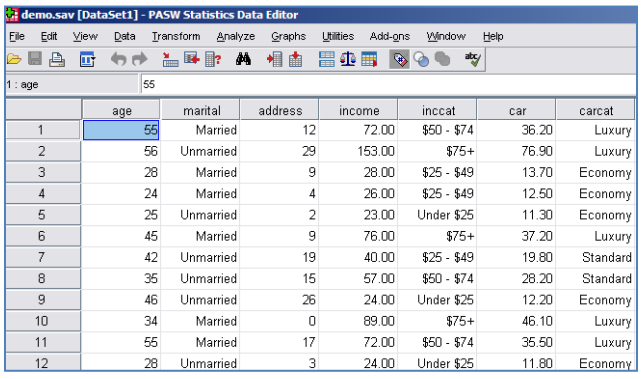
1. The file is displayed in the data editor of SPSS. These files are organized by cases (rows) and variables (columns). Cases represent individual responses to a survey. Variables represent responses to each question asked in a survey.

2. Place your cursor on a variable name (column heading) and a more descriptive variable label will display (if one has been defined).



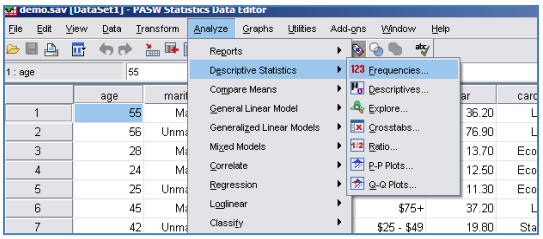
	age	marital	address	income	inccat	car
1	55	1	12	72.00	3.00	36.20
2	56	0	29	153.00	4.00	76.90
3	28	1	9	28.00	2.00	13.70
4	24	1	4	26.00	2.00	12.50

3. By default, data values are displayed. You can switch to data labels by clicking the **Value Labels** button  on the toolbar or going to the **View** menu and choosing **Value Labels**.

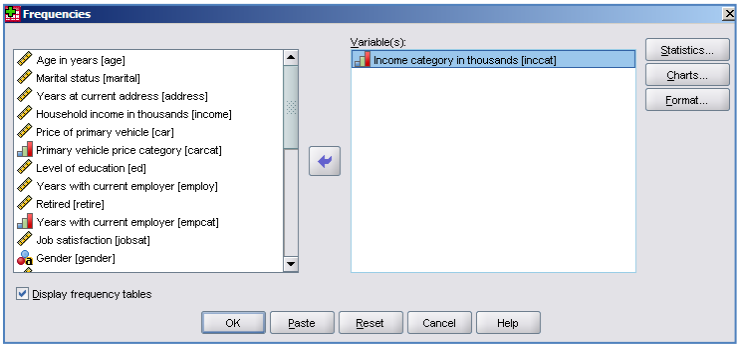


	age	marital	address	income	inccat	car	carcat
1	55	Married	12	72.00	$50 - $74	36.20	Luxury
2	56	Unmarried	29	153.00	$75+	76.90	Luxury
3	28	Married	9	28.00	$25 - $49	13.70	Economy
4	24	Married	4	26.00	$25 - $49	12.50	Economy
5	25	Unmarried	2	23.00	Under $25	11.30	Economy
6	45	Married	9	76.00	$75+	37.20	Luxury
7	42	Unmarried	19	40.00	$25 - $49	19.80	Standard
8	35	Unmarried	15	57.00	$50 - $74	28.20	Standard
9	46	Unmarried	26	24.00	Under $25	12.20	Economy
10	34	Married	0	89.00	$75+	46.10	Luxury
11	55	Married	17	72.00	$50 - $74	35.50	Luxury
12	28	Unmarried	3	24.00	Under $25	11.80	Economy

Creating a Frequency Table



1. Click on the **Analyze** menu.
2. Point to **Descriptive Statistics** then choose **Frequencies**.
3. The Frequencies dialog box is displayed.
4. This dialog box can be resized (made wider or higher) in order to see more of or the entire list of variables. Place your cursor on any border and simply drag.
5. Choose the variable(s) you want to analyze from the list on the left and drag them into the Variable(s) list on the right. You can also click on the "right arrow."
6. You can obtain additional information about a variable at any time by right-clicking the variable name in the list.
7. Once your variable(s) are chosen, click **OK** to row the frequency table.



8. Results are displayed in a separate "viewer" (output) window.

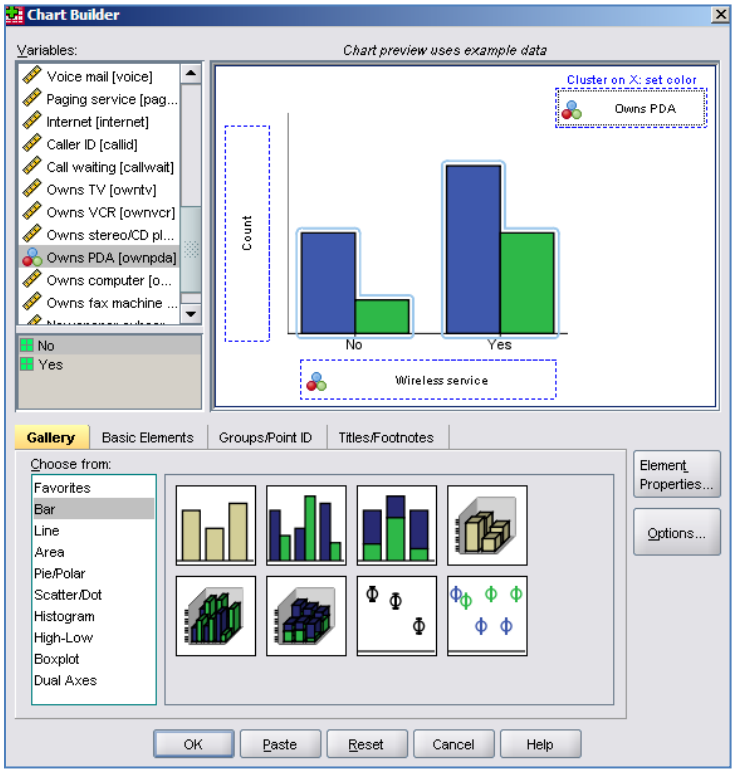
Income category in thousands

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under $25	1174	18.3	18.3	18.3
	$25 - $49	2388	37.3	37.3	55.7
	$50 - $74	1120	17.5	17.5	73.2
	$75+	1718	26.8	26.8	100.0
	Total	6400	100.0	100.0	

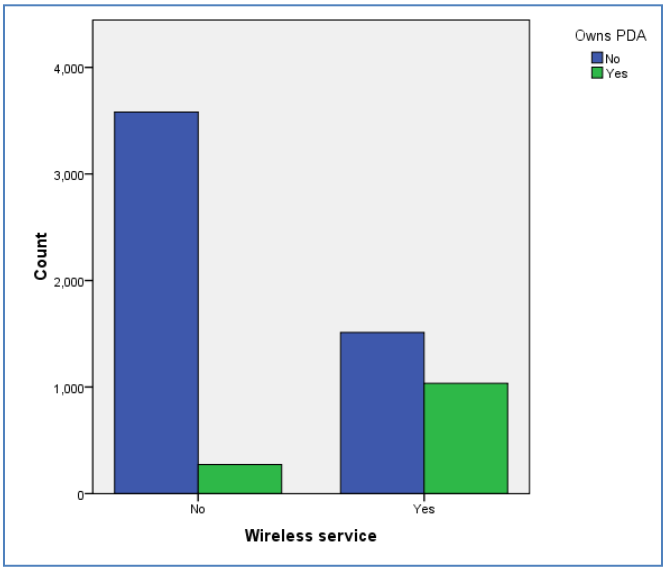
9. The frequency table shows a number and percentage.
10. You can save the viewer window by clicking on the **Save this document** button or by going to the **File** menu and choosing **Save**. This type of file will be saved with a .spv extension.

Creating Charts

1. Click on the **Graphs** menu.
2. Choose **Chart Builder.**
3. Click the **Gallery** tab.
4. Click **Bar** to create a bar graph.
5. Drag the *Clustered Bar* icon onto the canvas to create this type of graph.
6. To determine the people who have a wireless service that also own a PDA, two variables will need to be added to the canvas: *Wireless service* and *Owns PDA*.
7. Both variables need to be set to Ordinal measurement in order to create a graph. Right-click *Wireless service* and then choose *Nominal* as the measurement level.
8. Drag *Wireless service* to the *x axis*.
9. Right-click *Owns PDA* and choose *Nominal* as the measurement level.
10. Drag *Owns PDA* to the "cluster on x" area in the upper right corner.



11. Click **OK** to create the chart.



12. You can edit charts by double-clicking them in the contents pane of the viewer window.

13. You can also copy and paste your results into other applications.

Opening Excel Files

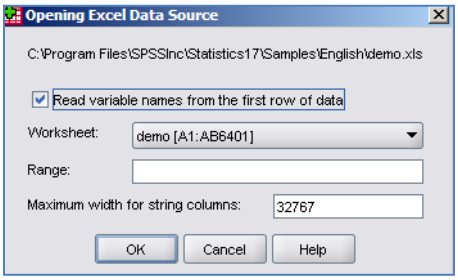
In order to easily open an Excel spreadsheet, the first row of the spreadsheet should be a heading row. Delete any blank rows, extra text, fancy formatting, etc.

1. Click on the **File** menu. Choose **Open** and then **Data**. (You can also click the **Open data document** button on the toolbar.)

2. In the *Files of type* drop-down box, choose *All Files*.

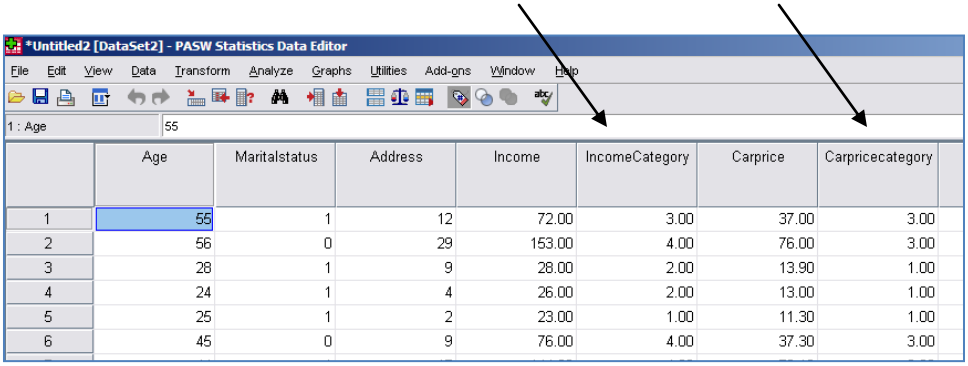
3. Browse to the folder and locate and open an Excel file (.xls extension).

4. In the Opening Excel Data Source dialog box, make sure *Read variable names from the first row of data* is checked. You can also specify a range or worksheet to use, if wanted.



5. Click **OK**.

6. The data should now appear in the data editor with the column headings used as the new variable names. Variable names cannot contain spaces. Therefore, spaces from the original headings will be removed.



	Age	Maritalstatus	Address	Income	IncomeCategory	Carprice	Carpricecategory
1	55	1	12	72.00	3.00	37.00	3.00
2	56	0	29	153.00	4.00	76.00	3.00
3	28	1	9	28.00	2.00	13.90	1.00
4	24	1	4	26.00	2.00	13.00	1.00
5	25	1	2	23.00	1.00	11.30	1.00
6	45	0	9	76.00	4.00	37.30	3.00

Creating a New Data File

The data editor displays the contents of the data file. There are two views in the data editor:

- *Data View*, where columns represent variables and rows represent cases
- *Variable View*, where each row is a variable and each column an attribute associated with a variable

Before data can be entered, the variables you will be using must be defined.

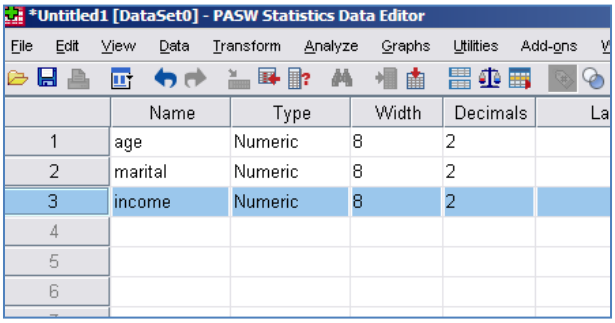
Numeric Variables and Data

1. Click the *Variable View* tab at the bottom of the data editor window.

2. Three variables will be used: *age, marital status,* and *income*.

3. In the first row of the first column, type *age*.
   In the second row of the first column, type *marital*.
   In the third row of the first column, type *income*.

4. New variables are automatically given a *Numeric* data type (see second column).



	Name	Type	Width	Decimals	La
1	age	Numeric	8	2	
2	marital	Numeric	8	2	
3	income	Numeric	8	2	
4					
5					
6					

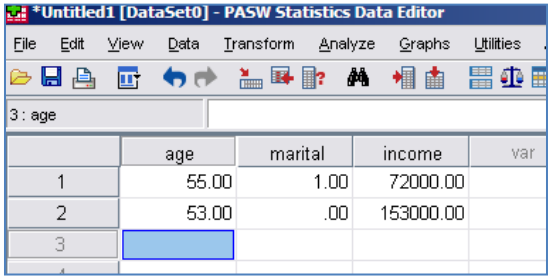
5. To enter data, click the *Data View* tab.

6. Notice that the names you entered in *Variable View* are now the headings for the first three columns in *Data View*.

7. Begin entering data for *age*, *marital* and *income* across the rows (use the **Tab** key:

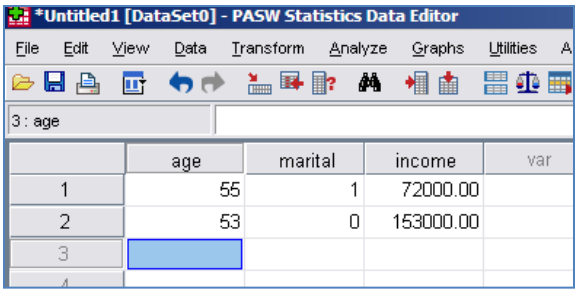
55	1	72000
53	0	153000

8. The *age* and *marital* columns display decimal points. You do not want decimal points.



9. Click the *Variable View* tab. In the *Decimals* column of the *age* and *marital* rows, type 0 to hide the decimals.

10. Switch back to *Data View*. The decimals are gone.



String Variables and Data

1. To add another variable which will consist of text (string), click the *Variable View* tab.

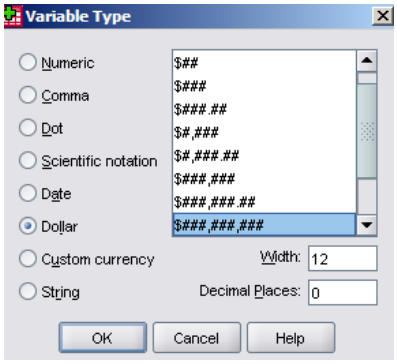
2. In the fourth row and first column, type *sex*.

3. Click into the *Type* cell next to your entry.

4. Select *String* to specify the variable type. You can also extend the default length (8) if you wish.

5. Click **OK**.

Changing Variable Types

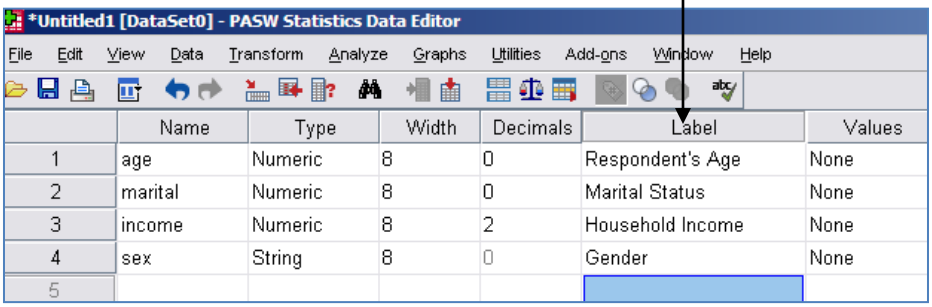


1. Click into the *Type* column for a variable (like *income*).
2. Select another type (like *Dollar*).
3. Select a format by clicking on it.
4. Click **OK**.

Adding Variable Labels

Labels provide descriptions of variables. They are longer versions of the variable names. These labels are used in your output to identify the different variables.

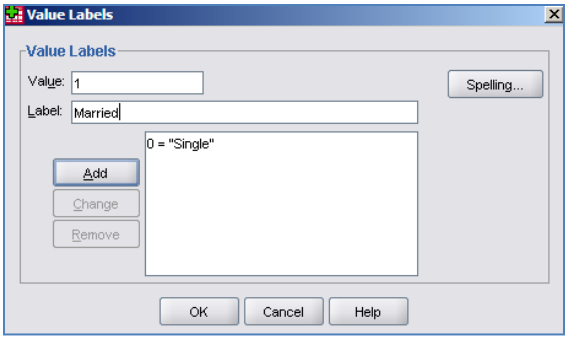
1. Click the *Variable View* tab.
2. In the *Label* column of the *age* row, type *Respondent's Age*.
   In the *Label* column of the *marital* row, type *Marital Status*.
   In the *Label* column of the *income* row, type *Household Income.*
   In the *Label* column of the *sex* row, type *Gender*.



	Name	Type	Width	Decimals	Label	Values
1	age	Numeric	8	0	Respondent's Age	None
2	marital	Numeric	8	0	Marital Status	None
3	income	Numeric	8	2	Household Income	None
4	sex	String	8	0	Gender	None
5						

Adding Value Labels

Value labels provide a way to interpret the numbers assigned to some of your variables.



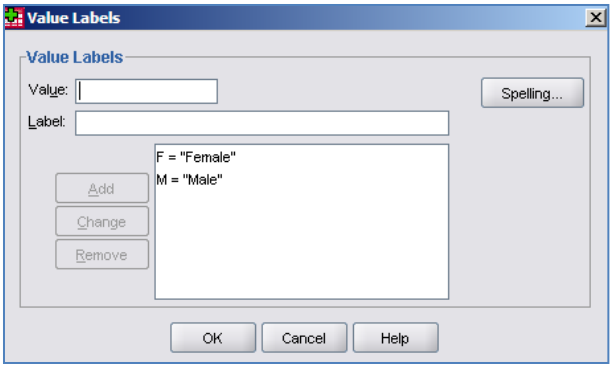
1. Click the *Values* cell for the *marital* row (a *Numeric* variable).
2. Type 0 in the *Value* field. Type *Single* in the *Label* field. Click **Add**.
3. Type 1 in the *Value* field. Type *Married* in the *Value* field. Click **Add**.
4. Click **OK**.

5. Click the *Values* cell for the *sex* row (a *String* variable).

6. Type *F* in the *Value* field. Type *Female* in the *Label* field. Click **Add**.

7. Type *M* in the *Value* field. Type *Male* in the *Label* field. Click **Add**.

8. Click **OK**.



Using Value Labels for Data Entry

1. Click the *Data View* tab.

2. Click the **Value Labels** button on the toolbar to display labels (if they aren't already displayed).

3. Select the first cell that represents *sex*.

4. Choose *Male* from the drop-down list.

5. In the second row, select the cell for *sex*.

6. Choose *Female* from the drop-down list.

Missing Data

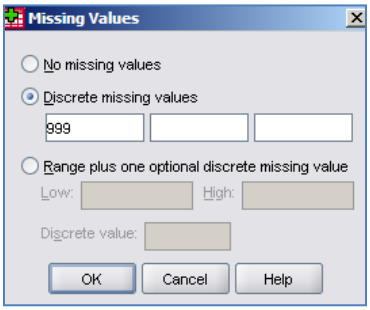
Missing data may result in your analysis producing inaccurate results. It should be coded.

1. Click the *Variable View* tab.

2. Click the *Missing* cell in the *age* row.

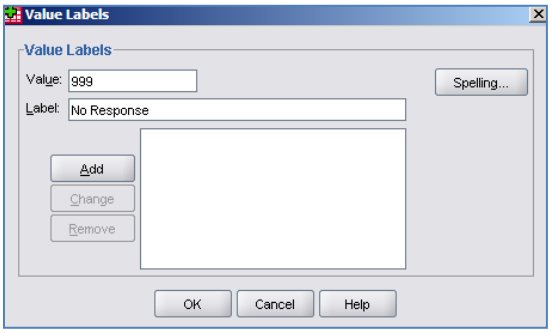
3. In the Missing Values dialog box, click into *Discrete missing values* and type 999.

4. Click **OK**.



5. Click the *Values* cell in the *age* row.

6. Type 999 in the *Value* field. Type *No Response* in the *Label* field. Click *Add*.



7. Click **OK**.

8. Click the *Missing* cell in the *sex* row.

9. In the Missing Values dialog box, click into *Discrete missing values* and type NR.

10. Click **OK**.

11. Click the *Values* cell in the *sex* row (you should already have M and F entered).

12. Type NR in the *Value* field. Type *No Response* in the *Label* field. Click *Add*.

13. Click **OK**.

Saving a Data File

1. Click the **Save this document** button on the toolbar or click on the **File** menu and choose **Save**.

2. The file will be saved with a .sav extension.