

Introduction (SPSS)

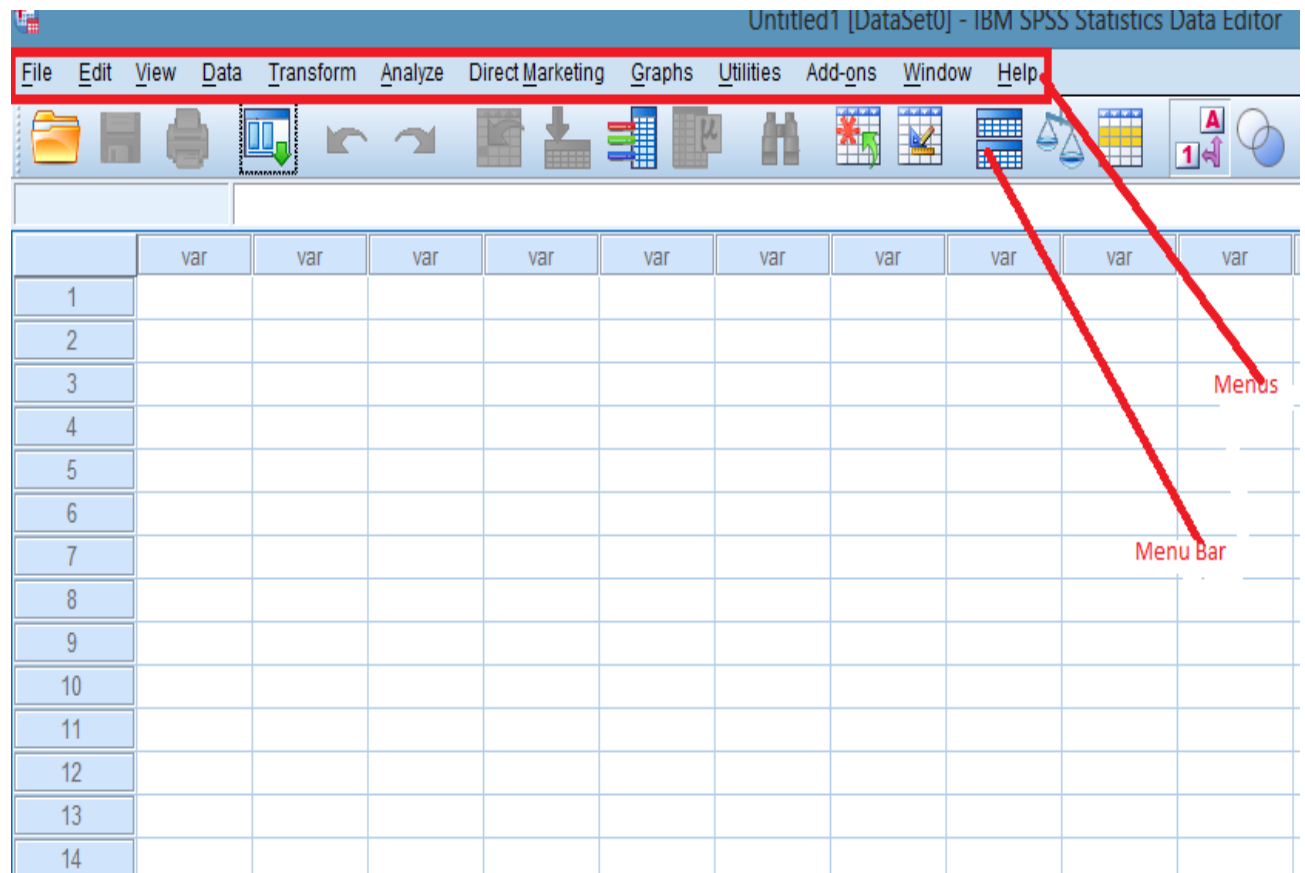
SPSS is the acronym of **Statistical Package for the Social Sciences**.

SPSS is one of the most popular statistical packages which can perform highly complex data manipulation and analysis with simple instructions.

Opening SPSS

Start → All Programs → SPSS Inc → SPSS 21

SPSS Menus



Review the options listed under each menu on the Menu Bar by clicking them one at a time. Follow along with the below descriptions.

- **File** includes all of the options you typically use in other programs, such as open, save, exit. Notice, that you can open or create new files of multiple types as illustrated to the right
- **Edit** includes the typical cut, copy, and paste commands, and allows you to specify various options for displaying data and output.

Click on Options, and you will see the dialog box to the left. You can use this to format the data, output, charts, etc. These choices are rather overwhelming,

and you can simply take the default options for now. The author of your text (me) was too dumb to even know these options could easily be set.

- **View** allows you to select which toolbars you want to show, select font size, add or remove the gridlines that separate each piece of data, and to select whether or not to display your raw data or the data labels.
- **Data** allows you to select several options ranging from displaying data that is sorted by a specific variable to selecting certain cases for subsequent analyses.
- **Transform** includes several options to change current variables. For example, you can change continuous variables to categorical variables, change scores into rank scores, add a constant to variables, etc.
- **Analyze** includes all of the commands to carry out statistical analyses and to calculate descriptive statistics. Much of this book will focus on using commands located in this menu.
- **Direct Marketing**
- **Graphs** includes the commands to create various types of graphs including box plots, histograms, line graphs, and bar charts.
- **Utilities** allows you to list file information which is a list of all variables, their labels, values, locations in the data file, and type.
- **Add-ons** are programs that can be added to the base SPSS package. You probably do not have access to any of those.
- **Window** can be used to select which window you want to view (i.e., Data Editor, Output Viewer, or Syntax). Since we have a data file and an output file open, let's try this.

Select Window/Data Editor. Then select Window/SPSS Viewer.

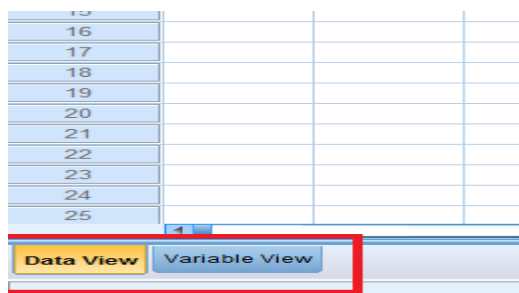
- **Help** has many useful options including a link to the SPSS homepage, a statistics coach, and a syntax guide. Using topics, you can use the index option to type in any key word and get a list of options, or you can view the categories and subcategories available under contents. This is an excellent tool and can be used to troubleshoot most problems.

The Icons directly under the Menu bar provide shortcuts to many common commands that are available in specific menus

When you open SPSS you should be faced with the following screen:

1. Data view

2. Variable view



Variable View window

This sheet contains information about the data set that is stored with the dataset

In this view each row will provide information for each variable.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

- **Name**

The first character of the variable name must be alphabetic

SPSS has a number of rules for naming variables:

- The length of the name cannot exceed 64 characters. Though, clearly, you should keep the variable name as short and succinct as possible, as we have done for the counselling questionnaire.
- The name must begin with a letter. The remaining characters can be any letter, any digit, a full stop or the symbols @, #, _ or \$.
- Variable names cannot contain spaces or end with a full stop.
- Each variable name must be unique: duplication is not allowed.
- Reserved keywords cannot be used as variable names. Reserved keywords are: ALL, AND, BY, EQ, GE, GT, LE, LT, NE, NOT, OR, TO, WITH.
- Variable names can be defined with any mixture of upper and lower case characters.

- **Type**

Click on the 'type' box. The most common choice is “**numeric**,” which means the variable has a numeric value. The other common choice is “**string**,” which means the variable is in text format. Below is a table showing the data types:

This column enables you to specify the type of variable.

Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure

Variable Type

Numeric
 Comma
 Dot
 Scientific notation
 Date
 Dollar
 Custom currency
 String
 Restricted Numeric (integer with leading zeros)

Width:

Decimal Places:

The Numeric type honors the digit grouping setting, while the Restricted Numeric never uses digit grouping.

Type	Example
Numeric	23456789
Comma	23,456,789
Dot	23.456.789
Scientific	34567 >>>3E+004 12000>>> 1E+004
Date	01-Feb-2000
Dollar	\$12,345,678 ,
Custom currency	(Edit>>Option>> Currency) SR 12,345
String	A , B , C

- **Width**

Width allows you to determine the number of characters SPSS will allow to be entered for the variable

- **Decimals**

SPSS defaults to two decimal places. Since our data does not require decimal places we can simply click in the Decimals cell and click the up or down arrows (which appear to the right of the cell) to adjust decimal places needed for that particular variable.

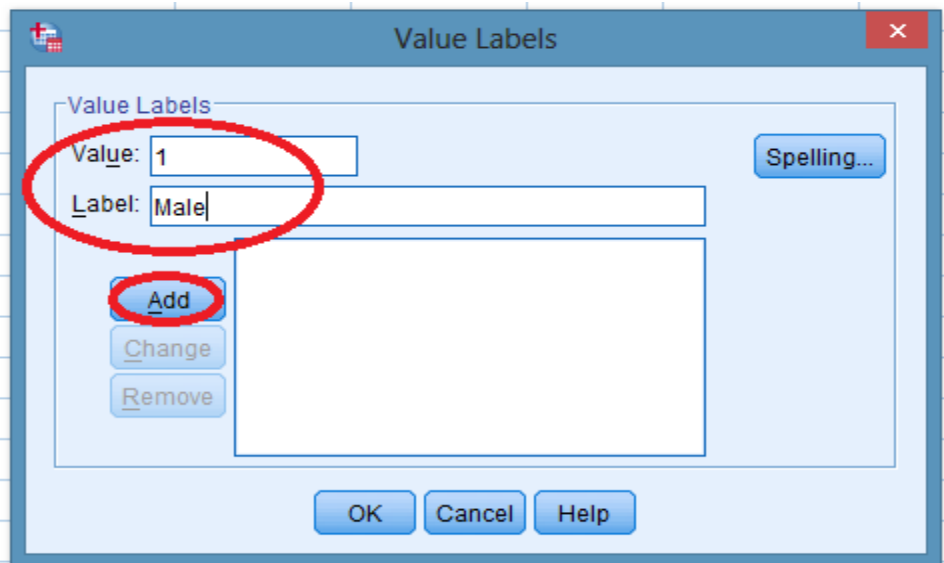
(It has to be less than or equal to 16)

- **Label**

The Label column allows you to provide a longer description of your variable, which will be shown in the output produced by SPSS.

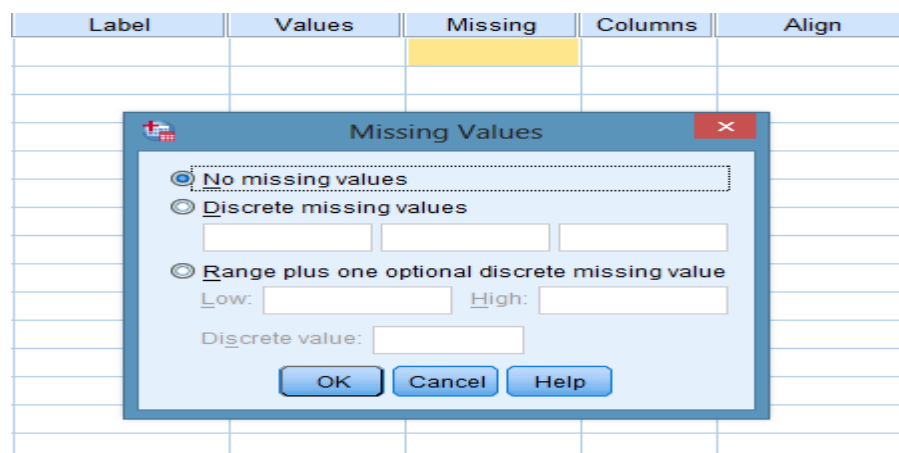
- **Values**

Values are numbers assigned to categories for nominal/ordinal variables, for example, where male = 1 and female = 2.



- **Missing value**

Sometimes it is useful to assign specific values to indicate different reasons for missing data. However, SPSS recognizes any blank cell as missing data and excludes it from any calculations, so if you intend to leave the cell blank there is no need to enter values for missing data. And we have no missing data anyway.



- **Columns**

You can change the column width to reduce the space it takes on the screen. But you need to allow enough space for variable names, so the default of eight is usually OK.

Values	Missing	Columns	Align
		0	

- **Align :**

Values	Missing	Columns	Align	Measure
			<div style="border: 1px solid black; padding: 2px;"> <ul style="list-style-type: none"> Left Right Center </div>	

- **Measure :**

Measure	Role
Scale	Input
Scale	
Ordinal	
Nominal	

The default measure is Scale, but you can change this to Ordinal or Nominal by clicking in the cell and then on the down arrow on the right of the cell. We have scale data and nominal data:

- ❖ **Scale:** For numeric values on an interval or ratio scale: age, sessions, satisfaction.

- ❖ **Nominal:** For values that represent categories with no intrinsic order: patient, sex, counsellor.
- ❖ **Ordinal:** For values with some intrinsic order (e.g., low, medium, high; first, second , third)

Entering Data into SPSS

- Switch from variable view to data view - Establish that all labels are evident across the top row of the data view window. - Once this has been established it is possible to begin inputting data.