

## SPSS Basics

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SPSS is a commonly used Statistical Package for the Social Sciences. This guide introduces users to the basics of SPSS

### The SPSS Data Editor

The SPSS Data Editor is the default window when you run SPSS. It is window-based, so many commands in SPSS can be run from the drop down menus.

The contents of the SPSS Data Editor or worksheet are saved into a .sav file.

The SPSS Data Editor has two views as standard:

- **Data View**
- **Variable View**

You can move from one view to another by clicking on the tab at the bottom of the worksheet as in Excel.

### Data View

The Data View works just like a spreadsheet, and allows you to input your data by:

- **Case**  
Each **line** of data represents the results of a single case, and often data is entered on a case by case basis ie, the survey responses of a particular individual. Cases can be selectively filtered to allow you to work only with data that meet your particular data, ie women, aged 60+.
- **Variable**  
Each **column** of data in the worksheet represents each variable that you are collecting data on, ie, sex, age, number of times used public transport in the last six months, satisfaction with a particular service.

## Variable View

This allows you control over the information that you hold on the variables that you have within a worksheet including the following:

- **Name**

In SPSS this is restricted to a fairly limited number characters so you need to be a bit imaginative!

- **Label**

This is a field which allows you to give a detailed description of your variable. The text entered here will appear in options for data description and analysis and will display in the titles of any output, ie tables or graphs.

- **Values**

Depending on the level of measurement being used this allows you to assign some meaning to the numbers that you are recording in the worksheet, ie for a variable 'Town' you might preset 23 different values, 1 = Anstruther, 2 = Ballingry, through to 23 = Tayport.

You may wish to define **missing values** to ensure that any missing data is excluded from analysis. Often the number '99' is used to represent a missing value.

- **Levels of Measurement**

This relates to the way in which you are using numbers as measurement.

- **Nominal**

Using numbers as labels, ie assigning 1 for Yes, 2 for No

- **Ordinal**

Using numbers to specify an order, ie from 1 to 10

- **Scale** (also referred to as **Interval** or **Ratio**)

Using numbers according to an exact scale of measurement. Interval scales have equal intervals between points, ie °C. Ratio scales also have equal intervals but ratios can be inferred from them, ie centimetres. It is possible to say that 20 cm is twice as long as 10 cm, but it is not possible to say that 20°C is twice as hot as 10°C.

The measurement that you use for your variables affects the 'power' of the statistical techniques that can be applied to your data with Ratio being the most powerful and Nominal being the least powerful.

## Some tips on using the Data View

- It is good practice to use the first column in the worksheet as a reference number.
- There is a function on the toolbar (shown as a label icon) that allows you to toggle between viewing the labels that you have given to your values for a particular variable and viewing the numbers that underlie your variables, depending on the task at hand and your own preference.

## Describing your data

The first step in any type of analysis is to describe your data. The two most common command paths you will use are:

- **Analyze, Descriptive Statistics, Frequencies**

This allows you to count the number of times something occurs. Select the variables that you want frequencies for, and click **OK**. This can be further refined by selecting options within **Statistics**, and **Charts**

- **Analyze, Descriptive Statistics, Crosstabs**

This allows you to compare two or more variables. The variables that you want to compare should be assigned to either row or column. Additional layers can also be used. Click to select Display Clustered Bar Charts if you want to create a graph of this comparison.

## SPSS Output

Any analysis that you carry out generates an SPSS Output file (.spo file). You can save output as separate files or keep output open as a cumulative record of your session. You can select objects from the output and paste them into other applications such as Excel. However, if you want to make changes to titles of tables or graphs then it is advisable to make the changes in the SPSS output before exporting them to other applications as it is not so easy to make changes like this outwith SPSS.

## Additional guidance

IBM SPSS Statistics 24 Brief Guide

[ftp://public.dhe.ibm.com/software/analytics/spss/documentation/statistics/24.0/en/client/Manuals/IBM\\_SPSS\\_Statistics\\_Brief\\_Guide.pdf](ftp://public.dhe.ibm.com/software/analytics/spss/documentation/statistics/24.0/en/client/Manuals/IBM_SPSS_Statistics_Brief_Guide.pdf)

SPSS for Dummies

[http://www.academia.dk/BiologiskAntropologi/Epidemiologi/PDF/SPSS\\_For\\_Dummies\\_2ndEd.pdf](http://www.academia.dk/BiologiskAntropologi/Epidemiologi/PDF/SPSS_For_Dummies_2ndEd.pdf)

SPSS Survival Manual

<https://www.mheducation.co.uk/openup/chapters/0335208908.pdf>