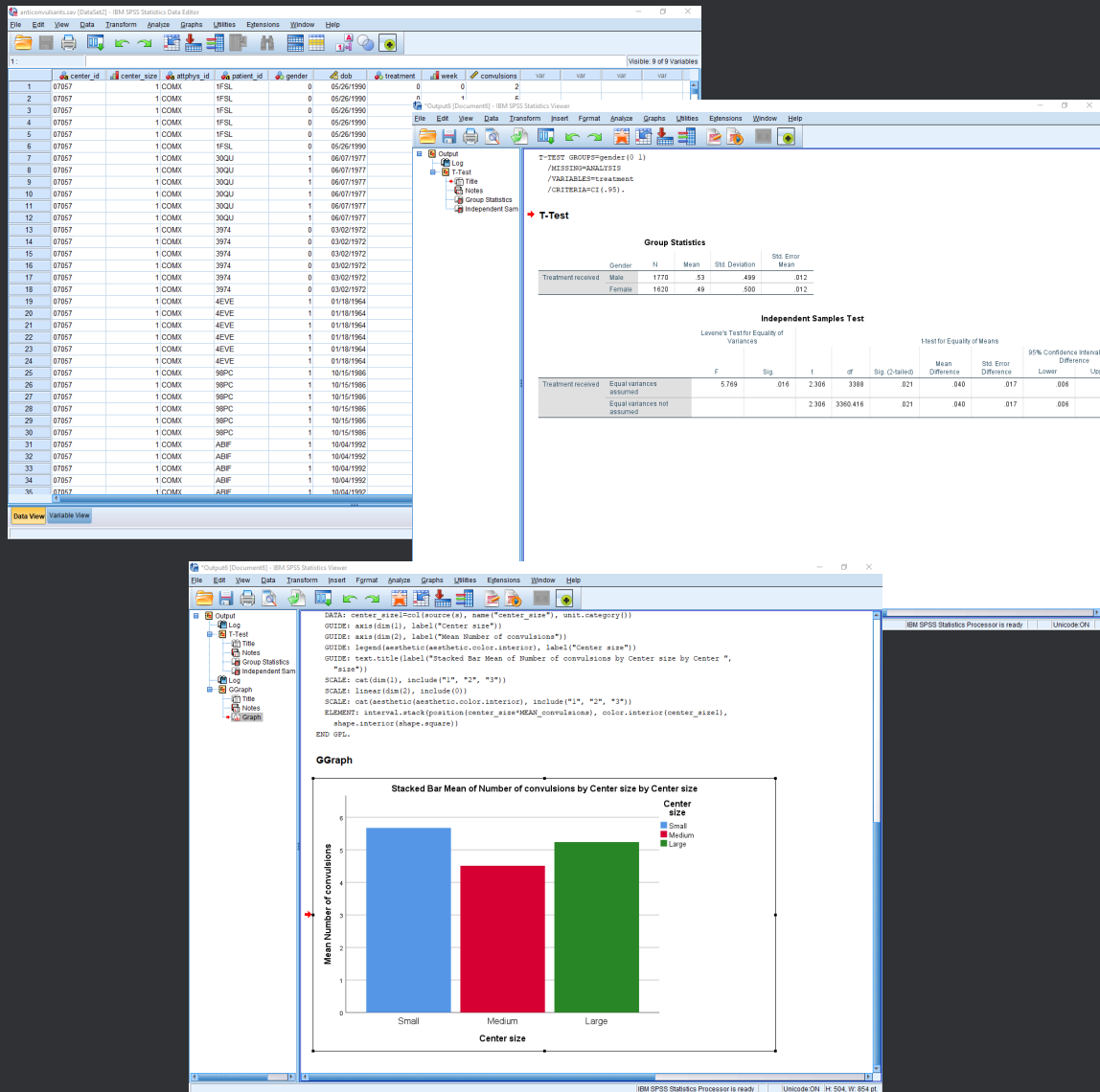


SPSS 31 Training Manual



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Entering Data

Note: All instructions are for SPSS 29, 30 and 31 but the majority are also applicable to earlier versions of the software. Further details about the software and its functionality can be found at the vendor's website: www.spss.com.

Adding Variable Names

SPSS will default to variable names such as **VAR00001**. Adding your own meaningful variable names will make your output easier to interpret.

1. Click the **Variable View** tab (bottom left) and select the data cell containing the default name you want to change.
2. Enter your new variable name and press **Enter**.
3. Repeat steps one and two for any other variables names, as required.

Note that there are some rules around how variables can be named:

- Variable names must begin with a letter and cannot end with a period.
- The length of the variable name cannot exceed 64 characters.
- Variable names cannot contain blanks or special characters.
- Each variable name must be unique.
- Avoid ending a variable name with an underscore.
- Reserved variable are: ALL, AND, BY, EQ, GE, GT, LE, LT, NE, NOT, OR, TO, WITH.

Assigning Variable Labels

1. Click the **Variable View** tab (bottom left) and then click inside the **Label** column for the required variable.
2. Enter the label into the cell, and press **Enter** (note that variables labels can contain up to 256 characters).
3. Repeat for any other variables, as required.



In **Data View**, if you hold your mouse over the short variable names in the grey boxes at the top of each column, the full variable name will appear.

Assigning Value Labels

Value labels are useful when entering categorical variables into SPSS. Numbers should be entered when entering such variables (rather than words), but you can use value labels to indicate what each number represents (e.g. 1 = male, 2 = female).

1. Click the **Variable View** tab (bottom left) and click on the row for your variable in the 'Values' column.
2. A blue box with three dots will now appear in the cell – click on this to open the **Value Labels** dialog box.
3. Click the + button.
4. Enter your first value in the 'Value' box and your label in the 'Label' box (e.g. "1" in the value box and "Male" in the label box). Click +.
5. If you make a mistake when entering in your labels, select the label with the error and make the appropriate correction. To remove a label completely, select it and click the x button.
6. Repeat the above steps with your second (and subsequent) values.
7. Click **OK** to return to the Variable View.



To display the labels in the **Data View**, choose **View ▸ Value Labels**.

Other Properties of Variables

Variable Type

The default option for variable type is 'Numeric' – this will be the most suitable type for most variables. Other common types you might require include 'Date', 'Dollar', and 'String'.

Decimals

This type relates to how many decimal places can be viewed in the spreadsheet – the default is two decimal places. This can be adjusted to suit your requirements in the **Variable View**. Some researchers dislike the fact that SPSS displays two decimal places by default – this can be changed in the SPSS options. To change this, choose **Edit ▸ Options**, and select the **Data** tab.

Width/Columns

The distinction between 'Width' and 'Columns' is slightly confusing – *columns* refers to the width of the column in the SPSS spreadsheet, while *width* refers to how many characters can be entered for the variable. If changing the width, it's usually best to change the columns value also.

Missing Values

It is unlikely that you will receive a complete dataset for all your cases. SPSS deals with missing values well, and it is possible to leave these cells empty. However, you can assign missing value codes if you want (ensure that you assign a number that is not used in your dataset).

1. Click the **Variable View** tab (bottom left) and select the 'Missing' cell for the row matching the required variable. Once the cell is selected, click on the small blue box with the three dots (...) that appears.
2. Choose 'Discrete missing values' and enter the missing values of your choice into the dialog box that opens (note that you only need to enter one value, but three options are provided).
3. Click **OK**.

Measure

Measure refers to the level of measurement for each of your variables. The default option is 'Scale' (for continuous data). For categorical data, there are also options for 'Ordinal' or 'Nominal'.



If you are entering several variables with the same variable properties such as value labels, type, number of decimal places etc., then you can copy those properties from one variable to as many others as you wish. In the **Variable View**, select the variable property, press **Ctrl + C** then select the cell(s) you wish to copy to and press **Ctrl + V**.

Inserting and Deleting Variables and Cases

Insert a New Case/Variable

1. Select a cell in the row below where you want the new case to appear (or to the right of the variable if inserting a variable).
2. Choose **Edit ▾ Insert Cases** or **Edit ▾ Insert Variable** as appropriate.

Delete a Case/Variable

1. Select the case number on the far left-hand side of the row(s) you want to delete (or the variable name at the top of the column).
2. From the menu bar choose **Edit ▾ Clear**.

Finding and Correcting Errors in Data Entry

A good way to check for data entry errors is to run some descriptive statistics on your dataset (see page 7 for details). Look for any values that fall outside the possible range, or anything else that looks unusual.

If you detect an error, return to the **Data View**, select the cell and type over the mistake (then press **Enter**).

Data in Non-SPSS Formats

Excel, SAS and other file types can be opened in SPSS without conversion.

1. From the menu bar, select **File** ▸ **Open** ▸ **Data**.
2. In the dialog box, navigate to the file you want to open. Note that you may need to change the 'File of type' option in the 'Open' dialog box to see your file.
3. Select the file and click **Open**.
4. SPSS will either open the file directly or open a wizard to take you through the import steps. If a wizard opens, work through the required steps.
5. Click **OK**.

Data Manipulation

Computing New Variables

To calculate a new variable (based on existing variables):

1. From the menu select **Transform ▸ Compute Variable**.
2. In the dialog box enter the target variable name.
3. Select the **Type & Label** button.
4. Enter an appropriate variable label and select either 'Numeric' or 'String' as the data type. Click **Continue**.
5. In the 'Numeric Expression' box on the right-hand side, enter the expression for your target variable (this can either be typed in directly or you can select the required variables on the left and use the calculator keypad provided).
6. Click **OK**. Your target variable will now appear in the **Data View**.

Some notes about the 'Compute' function:

- The numeric expression can also be calculated by using the built-in functions provided. To incorporate a function into a Numeric Expression, select the 'Function Group' followed by the specific function of your choice. Then use the upward arrow to add it into the Numeric Expression box. You will now need to fill in the necessary detail which will have been indicated in the function list. For example, the mean function is listed as MEAN (numexpr, numexpr[, ...]). When this is added into the numeric expression box it indicates that the variables should appear one by one, separated by a comma e.g. MEAN (sr1, sr2, sr3, sr4, sr5). Note that if your variables appear consecutively in the dataset you can shorten these expressions to MEAN (sr1 to sr5).
- If you use one of the built-in functions, a result will be calculated regardless of whether there are missing values. This may provide misleading results. To avoid this occurring, you can specify how many values must be present in order for the function to be calculated. To do so, change the function to SUM.x or MEAN.x (for example) where x is the number of values that must be present. For example, in the MEAN example shown above, if we wanted to ensure all five variables were part of the calculation we would have to write the function as 'MEAN.5 (sr1, sr2, sr3, sr4, sr5)'.

Recoding Variables

From the menu bar:

1. Select **Transform ▸ Recode into Different Variables** (or **Recode into Same Variables** if you want to overwrite the existing variable).
2. Select the variable you want to recode and add it to the 'Input Variable/Output Variable' box.

3. In the 'Output Variable' area, type in the name and variable label you require for the new variable.
4. Select the **Change** button.
5. Select the **Old and New Values** button.
6. The dialog box that open is split into two halves – the left-hand side is where the 'Old Value' is entered and then the new value is entered in the right-hand side. Enter the old and new values you require, clicking **Add** to save each one.
7. Click **Continue** followed by **OK**.
8. Your recoded variable will appear in the **Data View**.



Recoding is very useful when you need to 'reverse-order' Likert scales.

Automatic Recoding

1. From the menu bar select **Transform ▸ Automatic Recode**.
2. In the dialog box, use the right pointing arrow to move the variable you want to recode to the 'Variable ▸ New Name' area.
3. Enter a new name for the variable then click **Add New Name**.
4. Choose whether to start the recode from the 'Lowest value' or 'Highest value'.
5. Click **OK**. Your new variable will appear in the **Data Editor** and a report will appear in the Output Viewer.

Visual Binning

1. From the menu bar choose **Transform ▸ Visual Binning**.
2. In the dialog box select the variable you want to bin and add it the right-hand field.
3. Click **Continue**.
4. Enter a suitable name and variable label for your binned variable.
5. Click the **Make Cutpoints** button, and in the dialog box that appears, specify how you want your cutpoints to be created. Click **Apply**.
6. If you would like to add labels, click the **Make Labels** button – SPSS will create these for you, but they can be edited if required.
7. Click **OK**. Your new variable will appear in the **Data Editor**.

Calculating Simple Statistics

Frequencies

1. Select **Analyze ▸ Descriptive Statistics ▸ Frequencies**.
2. Select your variable(s) from the list on the left of the dialog box.
3. Click the arrow to move to the variable(s) over to the right-hand side into the 'Variable(s)' list.
4. Click **OK**.
5. The **Output Viewer** will display the results of the statistical procedure.



Information contained in the output viewer **needs to be saved separately from your data!** Make sure you save any output that you will need later; these files will be saved in a '.spv' format.

Descriptives

1. From the menu bar select **Analyze ▸ Descriptive Statistics ▸ Descriptives**.
2. Select your variable(s) from the list on the left of the dialog box.
3. Click the arrow to move to the variable(s) over to the right-hand side into the 'Variable(s)' list.
4. Click **OK**.
5. The **Output Viewer** will display the results of the statistical procedure.



The **Options** button in the 'Descriptive Statistics' dialog box can be useful to add some additional statistics to this procedure.

Explore

1. From the menu bar choose **Analyze ▸ Descriptive Statistics ▸ Explore**.
2. In the dialog box, from the list of variables on the left-hand side, move the variable(s) of your choice to the 'Dependent List' on the right-hand side.
3. Select the variable you require as your independent variable and add this to the 'Factor List' box.
4. Click **OK**.
5. The **Output Viewer** will display the results of the statistical procedure.

Crosstabs

1. From the menu bar chose **Analyze ▸ Descriptive Statistics ▸ Crosstabs**.
2. Move the first variable you require to the 'Row(s)' box.
3. Move the second variable you require to the 'Column(s)' box.
4. Select **OK**.
5. The **Output Viewer** will display the results of the statistical procedure.



You can also carry out a Chi-Square analysis for independence as part of a Crosstabs procedure – see page 10 for details.

Comparing Means

1. From the menu choose **Analyze ▸ Compare Means and Proportions ▸ Means**.
2. In the dialog box select your dependent variable(s) from the list on the left and add it to the 'Dependent List' box.
3. Add your independent variable to the 'Independent List' box.
4. Click **OK**.
5. The **Output Viewer** will display the results of the statistical procedure.

Statistical Procedures

One-Sample T-Test

1. From the menu bar select **Analyze** ▸ **Compare Means and Proportions** ▸ **One-Sample T-Test**.
2. In the dialog box, add your test variable to the 'Test Variable(s)' box on the right.
3. Enter your test value into the 'Test Value' box.
4. Click **OK**. The **Output Viewer** will display the results of the statistical procedure.

Independent-Samples T-Test

1. From the menu bar select **Analyze** ▸ **Compare Means and Proportions** ▸ **Independent-Samples T-Test**.
2. In the dialog box select your test variable from the list on the left-hand side and add it to the 'Test Variable(s)' box by clicking the arrow.
3. Select your grouping variable and add this into the 'Grouping Variable' box. Click the **Define Groups** button and enter the values that define your groups.
4. Click **Continue** then **OK**. The **Output Viewer** will display the results of the statistical procedure.

Paired-Samples T-Test

1. From the menu bar select **Analyze** ▸ **Compare Means and Proportions** ▸ **Paired-Samples T-Test**.
2. From the dialog box (on the left), select the two variables you want to analyse (hold down **Ctrl** to select more than one variable). Click the arrow to add these into the 'Paired Variables' list.
3. Click **OK**. The **Output Viewer** will display the results of the statistical procedure.

One Way Analysis of Variance

1. From the menu bar select **Analyze** ▸ **Compare Means and Proportions** ▸ **One-Way ANOVA**.
2. In the dialog box select your dependent variable from the list on the left-hand side and add it to the 'Dependent List' box by clicking the arrow.
3. Select your independent variable and add this into the 'Factor' box.
4. If you require a post hoc test, click the **Post Hoc** button and tick the box for the test of your choice.

5. Click **Continue** then **OK**. The **Output Viewer** will display the results of the statistical procedure.

Correlation

1. From the menu bar select **Analyze ▸ Correlate ▸ Bivariate**.
2. Select your variable(s) from the list of the left-hand side and add these to the 'Variable(s)' box.
3. Tick the box for the type of 'Correlation Coefficients' you require.
4. Click **OK**. The **Output Viewer** will display the results of the statistical procedure.

Linear Regression

1. From the menu bar select **Analyze ▸ Regression ▸ Linear**.
2. Within the dialog box, select your dependent variable and add to the 'Dependent' box.
3. Select your independent variable(s) and add to the 'Independent(s)' box.
4. Change any other options you require for your analysis.
5. Click **OK**. The **Output Viewer** will display the results of the statistical procedure.

Chi-Square: Goodness of Fit

1. From the menu bar select **Analyze ▸ Nonparametric Tests ▸ Legacy Dialogs ▸ Chi-Square**.
2. In the dialog box, select your variable and add it to the 'Test Variable List'.
3. Specify whether your analysis assumes equal categories or specific values in the 'Expected Values' box.
4. Click **OK**. The **Output Viewer** will display the results of the statistical procedure.

Chi-Square: Relatedness or Independence

1. From the menu bar select **Analyze ▸ Descriptive Statistics ▸ Crosstabs**.
2. Move the first variable you require to the 'Row(s)' box.
3. Move the second variable you require to the 'Column(s)' box.
4. Click the **Statistics** button, then tick 'Chi-square'.
5. Click **Continue** then **OK**. The **Output Viewer** will display the results of the statistical procedure.

Multiple Response Data

SPSS has a feature called **Multiple Response Variables** that enables you to analyse questions with more than one response. To use this feature however, your data must be entered in the SPSS Data Editor in a particular format.

Data Set-Up

There are two methods for entering multiple response data – using **dichotomies** or **categories**. **Dichotomies** are for variables such as yes/no questions – each yes/no variable should be entered as a separate column. **Categories** are appropriate when respondents can provide a range of possible answers. To enter these, find the maximum likely number of responses and create a variable for each in your SPSS file. You will then need to set up a coding scheme for each possible answer, and when entering the data, enter the coded value for each response.

Defining a Multiple Response Set

1. Open your data file.
2. From the menu bar, select **Analyze ▸ Multiple Response ▸ Define Variable Sets**.
3. In the dialog box, select your variables that make up the set, and add them into the 'Variables in Set' area.
4. To tell SPSS what kind of coding has been used, select either 'Dichotomies' or 'Categories' from the 'Variables are Coded As' section. If choosing 'Dichotomies' you'll need to specify what the 'Counted value' is in your data (i.e. what represents a 'yes' response). If choosing 'Categories' you'll need to specify the 'Range' of values you used in your coding scheme.
5. Enter a name and label for your set.
6. Click the **Add** button to save as a Multiple Response Set.



Note that this procedure does not create a new variable in the Data Editor. Instead, this set will now be available in the dialog boxes when running any of the multiple response analyses.

Analysing Multiple Response Sets

Frequencies

1. From the menu bar choose **Analyze ▸ Multiple Response ▸ Frequencies**.
2. In the dialog box, add your defined sets into the 'Table(s) for' field.

3. Click **OK**. The **Output Viewer** will display the results of the analysis.

Crosstabs

1. From the menu bar choose **Analyze ▸ Multiple Response ▸ Crosstabs**.
2. In the dialog box enter the required variables and Multiple Response Set(s) into the 'Row(s)' and 'Column(s)' fields as required.
3. In the **Options** dialog box (accessed from the button in the upper right corner) you can specify whether you want your data to display rows, columns or total percentages.
4. Click **OK**. The **Output Viewer** will display the results of the analysis.

Graphs

There are a number of ways to create graphs in SPSS, including the 'Chart Builder' and 'Graphpad Template Chooser'.

Histograms

1. From the menu bar, select **Graphs ▸ Histogram**.
2. Select the variable you want to analyse and move it into the 'Variable' box.
3. If you would like to display a normal curve, tick the option for 'Display normal curve'.
4. Click **OK**. The **Output Viewer** will display the graph.

Bar Graphs

1. From the menu bar select **Graphs ▸ Bar**.
2. From the dialog box, select the type of bar chart you would like to produce ('Simple', 'Clustered' or 'Stacked').
3. In the 'Data in Chart Area' area select the option you require.
4. Click **Define**.
5. Specify the options and variables you want to include in the bar graph.
6. Click **OK**. The **Output Viewer** will display the graph.

Scatterplots

1. From the menu bar select **Graphs ▸ Scatter/Dot**.
2. From the dialog box choose **Simple Scatter** (for example) then click the **Define** button.
3. Add the required variables to the **Y Axis** and **X Axis** boxes.
4. Click **OK**. The **Output Viewer** will display the graph.

Editing Graphs

To edit a graph, double click on it in the **Output Viewer** which will open the **Chart Editor**. Within the Chart Editor, select the aspect you want to edit. The properties window will open and allow you to make the changes. Once you are done, close the Chart Editor and your graph will be updated in the Output Viewer.

File Manipulation

Splitting Files

1. From the menu bar choose **Data ▸ Split File**.
2. In the dialog box, select whether you want to 'Compare Groups' or 'Organise output by groups'.
3. Move the required variable into the 'Groups Based on' field then click **OK**.
4. Any procedures run from this point forwards will be 'split' by the required variable.
5. To return to analysing *all* variables, from the menu bar choose **Data ▸ Split File**, select 'Analyze all cases, do not create groups' and click **OK**.

Data Selection

1. From the menu bar choose **Data ▸ Select Cases**.
2. In the dialog box, you will see various options: 'If condition is satisfied', 'Random sample of cases', 'Based on time or case range' and 'Use filter variable'. Select the option that suits your requirements, and in the new dialog box enter your selection criteria by choosing the appropriate variables and rules.
3. Click **Continue** followed by **OK**.
4. A series of slashed lines will appear on any rows of data that do not meet the selection criteria, and any procedures run from this point forwards will only include the selected cases. To return to analysing *all* variables, from the menu bar choose **Data ▸ Select Cases**, select 'All cases' and click **OK**.

Sorting Cases

1. From the menu bar select **Data ▸ Sort Cases**.
2. In the dialog box select your variable(s) and add to the 'Sort by' field.
3. Click **OK**.

Moving Variables

It is possible to reorder the sequence of your variables by either using 'cut and paste' or 'drag and drop' methods.

Variable Sets

Creating a Variable Set

1. From the menu bar choose **Utilities ▸ Define Variable Sets**.
2. In the dialog box, type a name into the 'Set Name' field.
3. Add the variables for the set to the 'Variables in Set' field.
4. Click **Add Set** followed by **Close**.

Using Variable Sets

1. From the menu bar choose **Utilities ▸ Use Variable Sets**.
2. In the dialog box deselect the default ALLVARIABLES and NEWVARIABLES and instead choose the variable set(s) you want to use.
3. Click **OK**.
4. To go back to viewing all variables, from the menu bar choose **Utilities ▸ Show All Variables**.

Saving a Selection of Variables

1. From the **Data Editor** menu bar, choose **File ▸ Save As**.
2. Click the **Variables** button.
3. In the dialog box select the box next to the variables you want to save and deselect the remainder.
4. Click **Continue** to return to the **Save Data As** dialog box, followed by **Save** to save the file.

Merging Files

Merging Cases

Both files must be in SPSS format and variable names must be identical in both files.

1. Open the file you want to add cases to.
2. From the menu bar, choose **Data ▸ Merge Files ▸ Add Cases**.
3. In the dialog box ensure the 'An external SPSS data file' option is selected, and use the **Browse** button to locate and select your second file.
4. Click **Continue**.
5. A dialog box will open showing 'Unpaired Variables' on the left-hand side of the box. If any of the variable do in fact match (i.e. SPSS has not picked up on them matching) select the matching

pair using the **Ctrl** key and then click **Pair** to add them into the 'Variables in New Active Dataset' field.

6. For any variables that do not match, but you want to include in the new dataset, these can be added across using the arrow button.
7. If you are adding cases for the purposes of later comparison it will be important to have an identifying variable so that you know which file each case came from. To create this, place a tick in the check box next to 'Indicate case source as variable' and provide a name for this new variable. Once you have merged your two files, you will have a new variable that has the values 1 and 0 to indicate which file the data originated from.
8. Click **OK**.

Merging Variables

When merging two files with the same cases but different variables: both files must be in SPSS format, the variables in each file must be unique and the file must be sorted by the key variable(s).

1. Open both data files and sort by the key variable(s).
2. From the menu bar in the Data Editor, choose **Data ▸ Merge Files ▸ Add Variables**.
3. In the dialog box, make sure the 'An external SPSS data file' option is selected and use the **Browse** button to locate and select your file with the additional variables.
4. Click **Continue**.
5. In the dialog box, select your 'Merge Method' as required.
6. Click the tab for 'Variables' and check the variables that SPSS has chosen as your 'Included Variables' and 'Key Variables'. Make changes to these as required.
7. Click **OK**.

Aggregating Data

To create an aggregate file, from the menu bar in the **Data Editor**, choose **Data ▸ Aggregate**

1. To specify a break variable, select it from the variable list and add it into the 'Break Variable(s)' box.
2. To specify aggregate variables, select them from the variables list and add them into the 'Aggregate Variable(s)' list. From here you can edit their details as required.
3. If you want SPSS to create a variable containing the number of cases in each group, you can do so by ticking the box next to 'Number of Cases'.
4. It is possible to add aggregated variables to the existing dataset, create (and open) a new dataset with only the aggregated variables, or save (write) a file with only the aggregated variables. Choose whichever of these three options best suits your needs.
5. Click **OK** to create the aggregate file.

Working with Output

Changing the Appearance of Tables

The first way to change the appearance of a table is simply to double click on the table itself. This will open a formatting toolbar for pivot tables, and you can make individual changes to the table cells here.

To change the overall look of a table:

1. Double click on the table in the **Output Viewer**.
2. From the menu bar select **Format ▾ TableLooks**.
3. From the dialog box that appears, select an overall 'look' for your table.
4. Click **OK**. This will update the formatting on the selected table in the **Output Viewer**.



You can change the default look for all tables by setting this **Edit ▾ Options** (under the 'Pivot Tables' tab).

Moving Output from SPSS

You can copy and paste SPSS output to other applications in the following formats (these may vary depending on your individual computer settings):

Microsoft Office Graphics Object	— Good for tables and charts — All formatting retained — Can be edited
Image	— Good for charts — All formatting retained — Editing not possible
RTF (Rich Text Format)	— Good for pivot tables — Most formatting retained — Can be edited
Text	— Good for tables — No formatting retained — Can be edited
BIFF	— Good for tables — Numeric precision retained

To copy and paste your output:

1. In the SPSS Output Viewer, right click the table or chart and choose **Edit ▾ Copy As ▾ [Required Option]**.
2. Select **OK**.
3. In the destination application, use **Ctrl + V** to paste.

Exporting Output

Exporting output is useful if you're working with a colleague who uses a different version of SPSS. It's also useful for archiving files in case you need to access them later but no longer have an SPSS license.

1. From the **Output Viewer**, choose **File ▾ Export**.
2. In the dialog box, set the options you require.
3. Click **OK**.

Working with SPSS Syntax

What is SPSS Syntax?

In early versions of SPSS it was necessary to write syntax in order to analyse your data. While this is no longer necessary, syntax can be useful for setting up frequently run sets of commands (and certain procedures are not available via the menu bar so they must be run via syntax).

```
T-TEST  
  GROUPS=gender(1 2)  
  /MISSING=ANALYSIS  
  /VARIABLES=ams1  
  /CRITERIA=CI(.95).
```

Each command begins with the name of the procedure you want to run, followed by the 'details' of the procedure. At the end of the command is a full stop, called the 'command terminator' – this tells SPSS that the command is finished.

Syntax Rules

- Each command must begin on a new line and end with a period (.).
- Most subcommands are separated by slashes (/). The slash before the first subcommand on a command is usually optional.
- Variable names must be spelled out in full.
- Text included within apostrophes or quotation marks must be contained on a single line.
- Each line of command syntax cannot exceed 80 characters.
- A period (.) must be used to indicate decimals.



Variable names ending in a period can cause errors in commands created by the dialog boxes. You should generally avoid this naming convention.

Command syntax is not case sensitive, and three-letter abbreviations can be used for many command specifications. You can use as many lines as you want to specify a single command. You can add space or break lines at almost any point where a single blank is allowed, such as around slashes, parentheses, arithmetic operators, or between variable names.

Delimiters

Delimiters are used to separate entries such as values and keywords from each other:

- A blank space is used to separate specifications from each other.
- Commas are used to separate arguments in functions.
- To improve readability, it is possible to use extra blank spaces but not commas.
- Arithmetic operators are used in expressions
- Other special delimiters include parentheses, apostrophes, quotation marks, the slash, and the equals sign.

Writing Syntax

Opening a New Syntax Window

Syntax files in SPSS have an "*.sps" file extension. To open a syntax window ready to write syntax, from the menu bar choose **File** ▸ **New** ▸ **Syntax**.

Writing Syntax by 'Pasting'

It is not necessary to memorise all the possible syntax commands. In all SPSS dialog boxes for procedures there is an option for **Paste**. If you click this button instead of **OK**, the SPSS Syntax Editor will open with the appropriate code pasted for the procedure.

At this point you can alter the code to suit your purposes, by altering the variables or options specified. You could also continue to build up your syntax file by adding consecutively from dialog boxes. Keep in mind that at this point the procedure has not actually been run, but the code to run it is available and ready to go.

Accessing Help for Syntax

If you require help while in a syntax window, simply click somewhere inside the command and select the **Syntax Help** button (look for this approximately halfway down the SPSS toolbar).

Unfortunately, it's possible that this may confuse you even more! When reading it, keep in mind the following:

- Square brackets such as [] indicate optional elements of the command.
- Brackets such as { } indicate alternatives.
- Upper case words represent procedures keywords and must be typed in exactly as they appear.
- Lower case words represent variable or dataset names.

Syntax assistance is also available through the help files. You can either search for help in the regular manner or you can choose **Help ▾ Command Syntax Reference**. This should open the full syntax help guide as a PDF, however this feature is sometimes not installed.

Using Comments

As you write syntax commands it is often helpful to write brief notes or 'comments' to describe what each command does. You must:

- Prefix your comment by either starting the line with the word **COMMENT** or an asterisk (*).
- Terminate your comment with a period (.).

Running Syntax

Choose the appropriate option from the **Run** menu in the Syntax Editor. Running a procedure will result in the Output Viewer being opened with the results ready for you to view.

Troubleshooting

Stopping the Processor

Occasionally when running syntax, you will find that the SPSS Processor does not stop running and you will be unable to perform any further procedures. This happens when you forget to place a period (.) at the end of a command. To stop the processor running so you can fix your syntax, hit **Ctrl+(.)**

Correcting Syntax

The following is a list of the most common syntax mistakes:

- Forgetting to use the command terminator (.) at the end of a command.
- Using variable names that don't conform to SPSS conventions or misspelling the names of variables or commands.
- Leaving out slashes or equals signs or incomplete pairs of parentheses, apostrophes or quotation marks.
- Using commands or subcommands out of order.

Keep in mind that early problems often trigger later ones, so correct the earliest problem first, then try running your syntax again.

Saving and Opening Syntax

When you have written a piece of syntax that you may need to use later, you can save your file from the menu of the Syntax Editor by clicking **File ▾ Save As**. To use it later, choose **File ▾ Open ▾ Syntax**.



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