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Tutorial: Using the Data Editor

This tutorial introduces the use of the Data Editor and demonstrates the following:
- Entering data in the Data Editor
- Naming variables
- Defining a string variable
- Defining value labels for a variable
- Saving data files

When you start an SPSS session, the Data Editor window automatically opens, as shown in Figure 3.1. (See Chapter 1 if you do not know how to start the software.)

Figure 3.1  Data Editor in Data view

The Data Editor provides a convenient spreadsheet-like facility for entering, editing, and displaying the contents of your data file. If you open a previously saved data file, you can use the Data Editor to change data values and add or delete cases and variables.
The Data Editor provides two views of your data:

- **Data View.** Displays the actual data values or defined value labels. You can also use the Data Editor to enter data and create a data file. See Figure 3.1 for an example of the Data Editor in Data view.

- **Variable View.** Displays variable definition information, such as variable and value labels, data type (string, date, or numeric), and measurement scale (nominal, ordinal, or scale), as shown in Figure 3.2.

In both views, you can add, change, and delete information contained in the data file.

![Figure 3.2 Data Editor in Variable view](image)

**Entering Data**

You can enter data, such as numbers, directly in the Data Editor. In Data view, simply type the number in the appropriate cell and press Enter. For example, you could enter the age for the students in your class:

1. If you are not already in Data view, click the Data View tab at the bottom of the window.

2. Click on the first cell in the Data Editor (top left corner) and type **21**.

The number also appears in the cell editor at the top of the Data Editor as you enter it.

By entering data in the cell, you automatically create a variable with the default name **var00001**, which is displayed at the top of the column. (Replacing...
default variable names is discussed on p. 31. Variable naming rules are listed on p. 36.)

3 Continue entering values in the first column:

19 (press Enter)
22 (press Enter)
(skip this cell; do not enter a value)
22 (press Enter)
20 (press Enter)
19 (press Enter)

The Data Editor should now look like Figure 3.3.

Figure 3.3  Data Editor after entering data

A period is displayed in the cell that does not have a data value. The period represents the system-missing value. In this example, it could be a person in the class who did not want to reveal his or her age.

**Naming Variables**

To replace the default variable name with a more descriptive variable name:

1 You first need to switch to Variable view. Double-click the variable name var00001 at the top of the first column to open the data file in Variable view, or click the Variable View tab at the bottom of the Data Editor window.

2 Select the cell with the default variable name var00001 and type **age**.
The variable name is automatically replaced. If you switch back to Data view by clicking the tab, you can see that the variable name *age* is now displayed at the top of the first column in the Data Editor.

**Defining Variables**

Using Variable view, you can change variable definition information, such as variable labels and variable type. When working with names, dates, and other non-numeric data, you need to define the variable type before entering your data. To define the variable type for a new variable:

1. Click the Variable View tab or double-click at the top of the second column of the Data Editor (to the right of the column of numbers you entered earlier).
2. You can give the new variable a name by typing *gender* in the *Name* cell.
3. Click the button in the *Type* cell for the new variable.

This opens the Variable Type dialog box, as shown in Figure 3.4.

**Figure 3.4 Variable Type dialog box**

![Variable Type dialog box](image)

4. Select *String* in the Variable Type dialog box and click OK.

The variable *gender* is now known as a *string variable*. A string variable can contain both letters and numbers.

**Adding Value Labels**

In Variable view, you can assign descriptive value labels for each value of a variable. Value labels make it easier to interpret your data, charts, and statistical results.

1. Click the button in the *Values* cell for the gender variable.
This opens the Value Labels dialog box, as shown in Figure 3.5.

**Figure 3.5  Value Labels dialog box**

1. Type `m` in the Value text box.
2. Type **Male** in the Value Label text box.
3. Click Add.
4. Go back and type `f` in the Value text box.
5. Type **Female** in the Value Label text box.
6. Click Add, and then click OK to return to Variable view.

You can now use the single letter codes `m` and `f` (lower case in this example) for data entry, and the more descriptive value labels, **Male** and **Female**, will be displayed in statistical output and charts. Note that string values are case sensitive. This means that using the uppercase `M` and `F` will not assign the value labels **Male** and **Female**.

8. In order to enter gender data, you need to switch to Data view (click the Data View tab).

9. In the column for the string variable **gender**, type the following:

   - `m` (press Enter)
   - `m` (press Enter)
   - `f` (press Enter)
   - `m` (press enter)
   - `f` (press Enter)
   - `f` (press Enter)
   - `m` (press Enter)

10. From the menus choose:

    View
    Value Labels

   The value labels for **gender** are now displayed in the Data Editor, as shown in Figure 3.6. If you click on any cell in the column for the variable **gender**, the
actual value will be displayed in the cell editor at the top of the Data Editor window.

Figure 3.6   Data Editor with value labels displayed

Saving a Data File

If you want to save the data file:

1. Make the Data Editor the active window (click anywhere in the Data Editor).
2. From the menus choose:
   File
   Save As...

This opens the Save Data As dialog box, as shown in Figure 3.7.
3 Enter a name for the data file in the File Name text box and click Save to save the data file.

By default, data files are saved in SPSS format. For information on saving (or reading) data files in other formats, see Chapter 11.

**Additional Information**

The following sections provide additional information that you might find useful.

**Moving Variables in the Data Editor**

You can rearrange variables in the Data Editor using the drag-and-drop method:

1 Click the variable name in Data view or the row number for the variable in Variable view to select the variable.

2 Drag and drop the variable to the new location.

3 If you want to place the variable between two existing variables, in Data view drop the variable on the variable column to the right of where you want to place the variable. In Variable view, drop it on the variable row below where you want to place the variable.
Missing Values

The data you want to use for analysis may not always contain complete information for every case. For example, some respondents may refuse to answer a certain survey question. There are two methods for handling missing values.

- **System-missing value.** If no value is entered for a numeric variable, the system-missing value (represented by a period in the Data Editor) is assigned.

- **User-missing values.** Data can be missing for a variety of reasons. If you know why particular data are missing, you can assign values that identify information missing for specific reasons and then flag these values as missing. To define user-missing values, switch to Variable view and scroll to the *Missing* column. Select the desired cell and click the button to open the Missing Values dialog box. Then enter the values or range of values that represent missing data.

Variable Naming Rules

The basic rules for variable names (not variable labels) are:

- The name must begin with a letter.
- Variable names cannot end with a period.
- The length of the variable name cannot exceed eight characters.
- Variable names cannot contain blanks or special characters (for example, !, ?, ', and *).
- Each variable name must be unique. Duplication is not allowed.
- Variable names are not case sensitive.

What’s Next?

At this point, you can exit the program or continue with the next tutorial.