

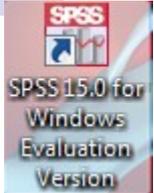
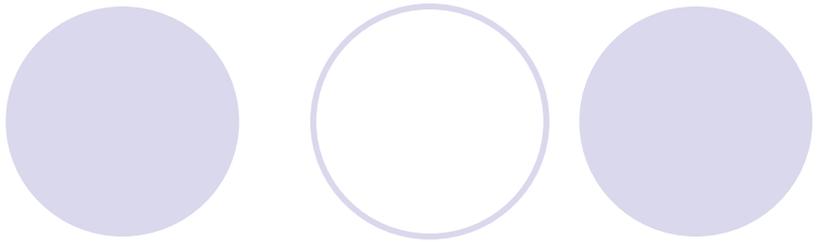
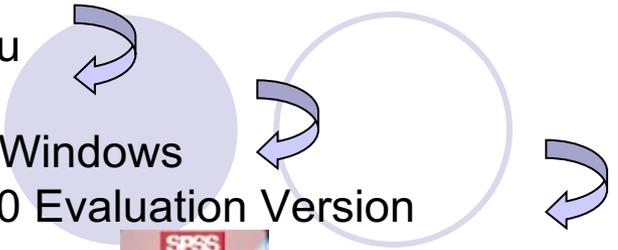
# SPSS Statistical Package for the Social Sciences



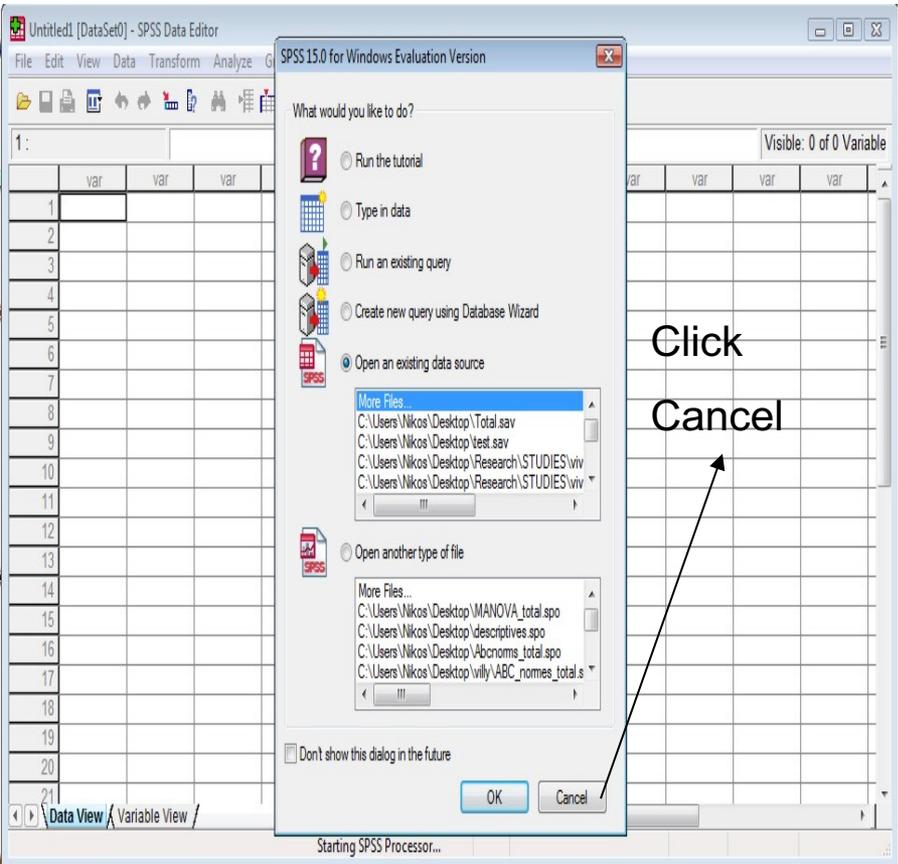
**SPSS**

Nikos Comoutos PhD

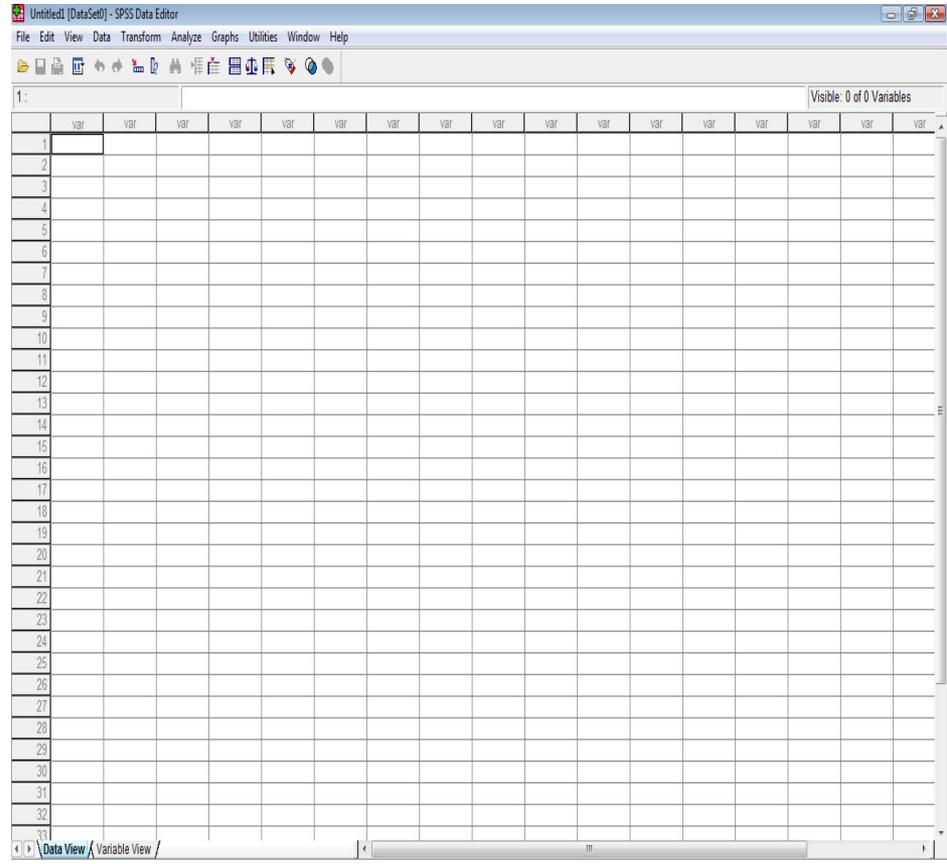
Start menu  
Programs  
SPSS for Windows  
SPSS 15.0 Evaluation Version



or double click



Click  
Cancel





# Commands

File Edit View Data Transform Analyze Graphs Utilities Window Help

- **File** create or save a data file, open an existing one
- **Edit** transform, copy / paste an existing data file
- **View** change the number of information that exist in our working environment
- **Data** merge files, select cases, sort cases
- **Transform** compute variables, recode variables
- **Analyze** perform statistical tests
- **Graphs** create graphs (bars, histograms)
- **Utilities**
- **Window**, files that are already open
- **Help**

# Tools

Print

Open file

Shortcuts for commands



Save file

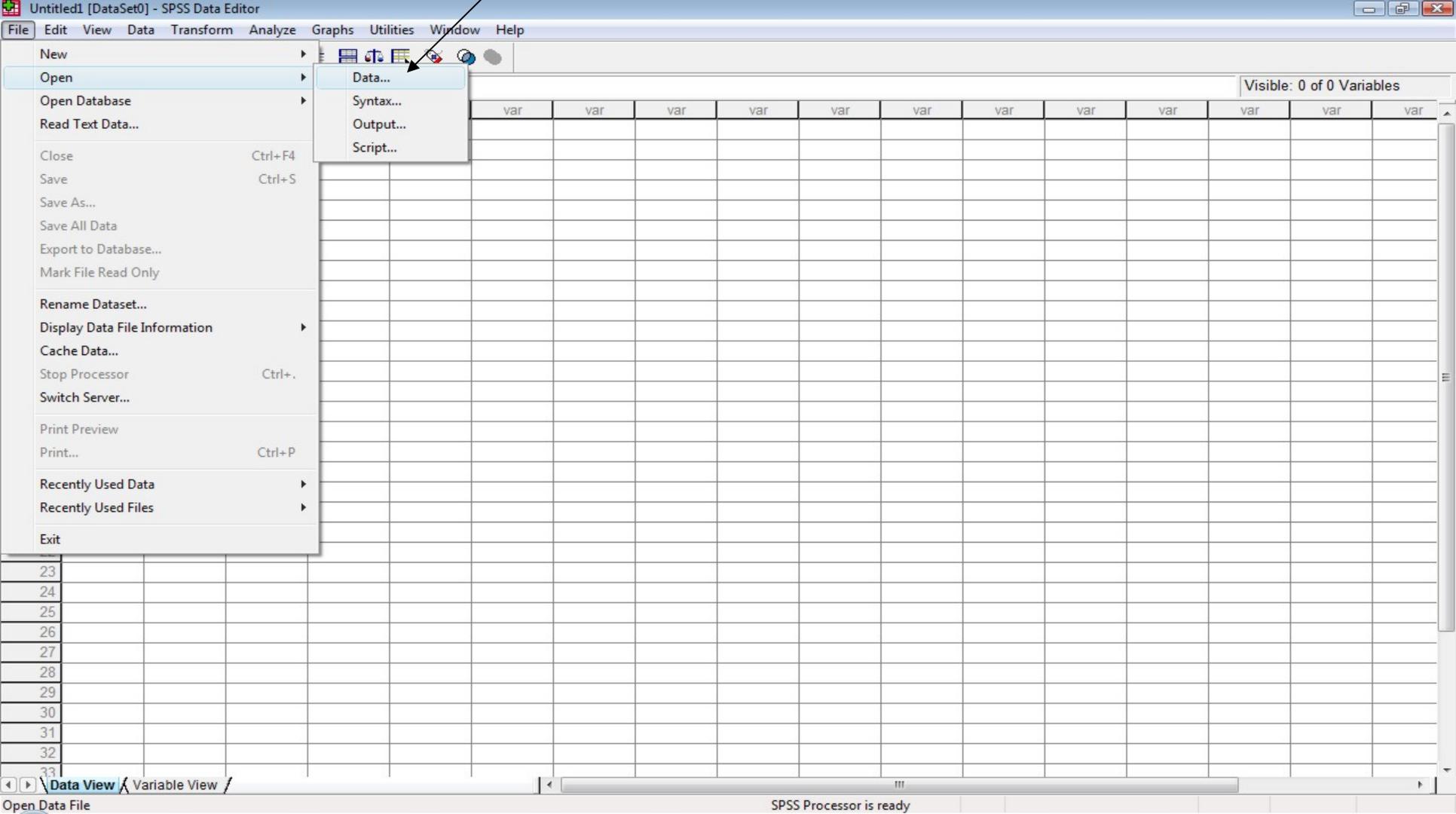
Find

Insert new participant

Insert new variable

Value labels

Open file .sav that we have saved in a folder or desktop



Left click e.g. file  
**Total**

Left click - **Open**

The screenshot shows the SPSS Data Editor interface with an 'Open Data' dialog box open. The dialog box is titled 'Open Data' and shows the 'Look in:' location as 'Desktop'. A list of files and folders is displayed with columns for Name, Size, Type, and Date modified. The file 'Total' is selected, and its details are shown in a tooltip: Type: SPSS Data Document, Size: 12,8 KB, Date modified: 21/2/2009 9:16 μμ. The 'Open' button is highlighted, and a tooltip also shows 'Open', 'Paste', and 'Cancel' buttons. The background shows a grid with columns labeled 'var' and rows numbered 1 to 33. The status bar at the bottom indicates 'SPSS Processor is ready'.

Name	Size	Type	Date modified
File Folder		File Folder	
ssq		File Folder	
stats		File Folder	
STATS_Undergraduates		File Folder	
DATA MATHITIAS AGORASTOU-1		SPSS Data Document	
test	76,3 KB	SPSS Data Document	
Total	12,8 KB	SPSS Data Document	

Two windows open

**Data file** (stores the data \*.sav)

**Output viewer** (*statistical analyses* \*.spo) we minimize this window

**Output – SPSS Viewer** stores charts graphs, tables and results of statistical analyses

The screenshot shows the SPSS Data Editor window with the following data:

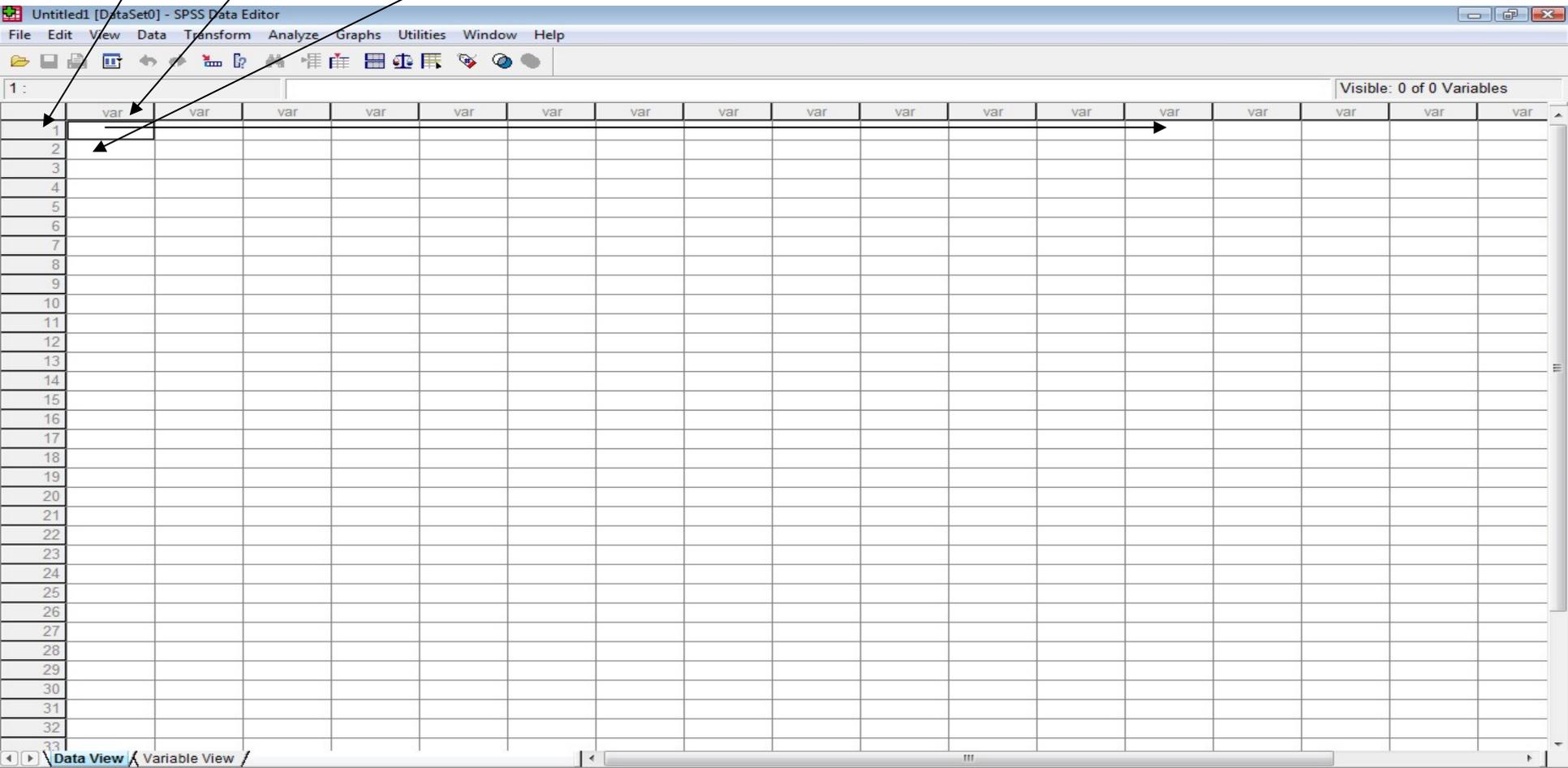
mandx3	madx3abc	mandxabc	ball1do	ball1nd
0	,0	3,00	5	.
1	1,0	1,50	3	.
0	,0	,50	10	.
0	,0	4,50	8	.
0	,0	1,00	10	.
0	,0	1,00	5	.
0	,0	3,00	10	.
0	,0	3,50	9	.
0	,0	2,00	10	.
0	,0	1,50	5	.
0	,0	1,00	8	.
0	,0	1,00	6	.
0	,0	2,50	6	.
0	,0	1,50	8	.
0	,0	2,00	5	.
0	,0	3,50	9	.
0	,0	1,00	9	.
0	,0	1,00	4	.
1	1,0	2,50	2	.
0	,0	2,50	8	.
1	1,0	1,50	10	.
0	,0	7,50	5	.
0	,0	4,00	9	.
1	1,0	1,50	10	.
0	,0	4,50	10	.
0	,0	,00	9	.
0	,0	2,50	9	.
0	,0	3,50	8	.
0	,0	2,50	7	.
0	,0	,00	8	.
0	,0	,50	9	.
0	0	4,00	7	.



- Lines (1,2,3,4...) represent cases-participants
- Columns represent (variables), whereas in the cells we enter the values.
- E.g., case 1, variables: age, gender, sport etc., the first value of variable age of the first participant is 14.

id	age	gender	sport	spotype	experien	level	coach	train_d	train_h	sas1	sas2	sas3
1	14,00	2,00	volley	2,00	1,00	1,00	1,00	2,00	4,00	1,00	1,00	1,00
2	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00	1,00	2,00
3	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00	4,00	1,00
4	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	2,00	3,00	3,00
5	14,00	2,00	volley	2,00	1,00	2,00	1,00	2,00	4,00	1,00	2,00	1,00
6	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00	1,00	2,00
7	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00	1,00	2,00
8	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	2,00	4,00	2,00
9	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00	1,00	2,00
10	14,00	2,00	volley	2,00	2,00	1,00	1,00	2,00	4,00	2,00	1,00	2,00
11	12,00	1,00	podosfairo	2,00	2,00	1,00	3,00	3,00	1,00	2,00	2,00	3,00
12	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00	1,00	1,00
13	17,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00	2,00	2,00
14	15,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	2,00	1,00	1,00
15	16,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	2,00	2,00	2,00
16	17,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	1,00	2,00	3,00
17	14,00	1,00	podosfairo	2,00	1,00	1,00	2,00	3,00	6,00	2,00	2,00	2,00
18	15,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	2,00	1,00	1,00
19	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	2,00	2,00	2,00
20	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	2,00	2,00	2,00
21	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00	1,00	2,00
22	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	1,00	2,00	2,00
23	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	2,00	2,00	2,00
24	18,00	1,00	podosfairo	2,00	4,00	1,00	2,00	3,00	6,00	1,00	4,00	3,00
25	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00	1,00	2,00
26	18,00	1,00	podosfairo	2,00	4,00	1,00	2,00	3,00	6,00	1,00	2,00	2,00
27	15,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	1,00	2,00	2,00
28	15,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	2,00	2,00	2,00
29	14,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	1,00	2,00	2,00
30	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00	4,00	2,00
31	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	1,00	1,00	2,00
32	15,00	1,00	mpasket	2,00	3,00	1,00	2,00	3,00	6,00	1,00	3,00	3,00
33	14,00	1,00	mpasket	2,00	1,00	1,00	1,00	3,00	6,00	1,00	1,00	1,00

Each row represent a different participant and each column should correspond to a different measure (e.g., age, gender) of a particular case or participant. You should enter new data horizontally until all measures of the first participant have been inserted and then you can go to the second row and enter the data for the second participant



# Label of variable

- If we don't label our variables SPSS defines them as VAR00001, etc. It is important to label all variables (e.g., age, gender) and give details about their format.
- **Click variable view**

The screenshot shows the SPSS Variable View window. The menu bar includes File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Window, and Help. The toolbar contains various icons for file operations and data manipulation. The window title is '2 : VAR00001'. The main area is a grid with 33 rows and 6 columns. The first row is highlighted, showing 'VAR00001' in the first column, '1,00' in the second column, and 'var' in the remaining four columns. The bottom status bar shows 'Data View' and 'Variable View' tabs, with 'Variable View' being the active tab. An arrow points from the text 'Click variable view' to the 'Variable View' tab.

	VAR00001	var	var	var	var
1	1,00				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

- E.g., write age instead of VAR00001 for variable 1 which correspond to the age of the first participant. 1 does not correspond to participant 1 but to variable 1 (VAR00001) of the data viewer. Below write the second variable for example Gender, the third Sport etc.

The screenshot shows the SPSS Data Editor interface. The main window displays a table of variable definitions. Below it, a smaller window shows the variable list with '2 : VAR00001' selected and 'VAR00001' in the input field.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	age	Numeric	8	2		None	None	8	Right	Scale
2	gender	Numeric	8	2		None	None	8	Right	Scale
3	sport	Numeric	8	2		None	None	8	Right	Scale
4										
5										
6										
7										
8										

File	Edit	View	Da
2 : VAR00001			
VAR00001			

- VAR00002 write gender. Click *Values* to label the values of a variable. Click to activate the button... The variable gender describes the gender of the participant. Each gender has been given a code and a description (e.g., code 1 for men). After you label men click *Add* and carry one with the same way about *females*. If you want to view the labels instead of values click *Value Labels* option in the *View menu*.

The screenshot shows the SPSS Data Editor window with the 'Value Labels' dialog box open for the variable 'gender'. The 'Value' field contains '1' and the 'Label' field contains 'men'. The 'Add' button is highlighted. The background table shows the following data:

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	age	Numeric	8	2		None	None	8	Right	Scale
2	gender	Numeric	8	2		None	None	8	Right	Scale
3	sport	Numeric	8	2		None	None	8	Right	Scale

The screenshot shows the SPSS Data Editor window with the 'Value Labels' dialog box open for the variable 'gender'. The 'Value' field contains '2' and the 'Label' field contains 'females'. The 'Add' button is highlighted. The background table shows the following data:

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	age	Numeric	8	2		None	None	8	Right	Scale
2	gender	Numeric	8	2		None	None	8	Right	Scale
3	sport	Numeric	8	2		None	None	8	Right	Scale

# Variable view



- Name. We give a short name. No more than eight characters long.
- Type. Specify the type of a variable. Click on the button ...to select **string** option if a variable is nominal (letters instead of numbers or combination of letter and numbers) and **numeric** if a variable consists of numbers only.
- Decimals. Lets you specify the number of decimals.
- Labels. Detailed description of a variable (no restriction of characters)
- Values. Label the values of a variable (see slide 14)
- Missing. If a variable has values ranging from 0-4, you can use the number 9 as a code to indicate missing values.
- Columns and Align. Specify the width of a column and the alignment of the values in the column.
- Measure. Scale represents numeric variables. We usually use scale (interval or ratio scale). An interval scale has equal intervals but there is no absolute zero. In contrast a ratio scale has equal intervals as well as an absolute zero. Ordinal refers to a ranking of variables but no indication of how much better one variable is compared to another (e.g., high, medium, low). Nominal = distinct groups e.g., males and females.

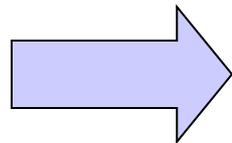
# Insert new case

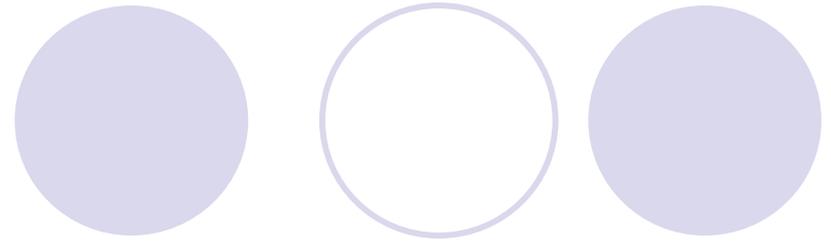
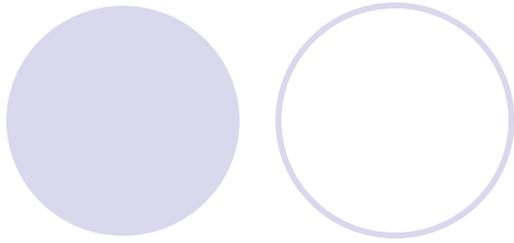
test.sav [DataSet1] - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

9 : id      Insert Cases

	id	source	age	gender	sport	spotype	experien	level	coach	train_d	train_h	sas1
1	.	2,00	14,00	2,00	volley	2,00	1,00	1,00	1,00	2,00	4,00	1,00
2	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
3	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
4	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	2,00
5	.	2,00	14,00	2,00	volley	2,00	1,00	2,00	1,00	2,00	4,00	1,00
6	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
7	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
8	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	2,00
9	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
10	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	1,00	2,00	4,00	2,00
11	.	2,00	12,00	1,00	podosfairo	2,00	2,00	1,00	3,00	3,00	1,00	2,00
12	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00
13	.	2,00	17,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00
14	.	2,00	15,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	2,00
15	.	2,00	16,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	2,00
16	.	2,00	17,00	1,00	podosfairo	2,00	1,00	1,00	1,00	3,00	6,00	1,00
17	.	2,00	14,00	1,00	podosfairo	2,00	1,00	1,00	2,00	3,00	6,00	2,00
18	.	2,00	15,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	2,00
19	.	2,00	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	2,00
20	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	2,00
21	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00
22	.	2,00	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	1,00
23	.	2,00	17,00	1,00	podosfairo	2,00	3,00	1,00	2,00	3,00	6,00	2,00





- click **Insert cases**

\*test.sav [DataSet1] - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

9 : id

	id	source	age	gender	sport	spotype	experien	level	coach	train_d	train_h	sas1
1	.	2,00	14,00	2,00	volley	2,00	1,00	1,00	1,00	2,00	4,00	1,00
2	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
3	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
4	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	2,00
5	.	2,00	14,00	2,00	volley	2,00	1,00	2,00	1,00	2,00	4,00	1,00
6	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
7	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
8	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	2,00
9	.											
10	.	2,00	15,00	2,00	volley	2,00	2,00	1,00	2,00	2,00	4,00	1,00
11	.	2,00	14,00	2,00	volley	2,00	2,00	1,00	1,00	2,00	4,00	2,00
12	.	2,00	12,00	1,00	podosfairo	2,00	2,00	1,00	3,00	3,00	1,00	2,00
13	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00
14	.	2,00	17,00	1,00	podosfairo	2,00	2,00	1,00	2,00	3,00	6,00	1,00

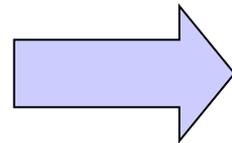
# Insert variable

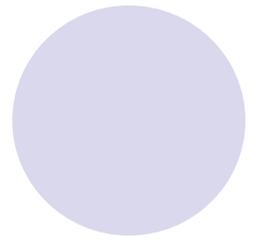
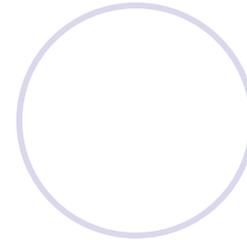
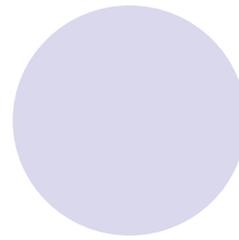
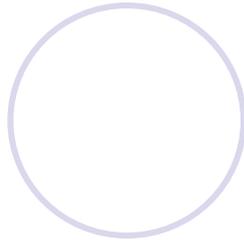
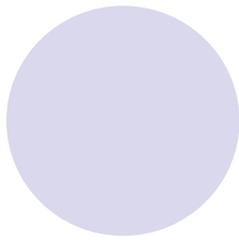
\*test.sav [DataSet1] - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

1 : spotype 2 Insert Variable

	id	source	age	gender	sport	spotype	experien	level
1	.	2,00	14,00	2,00	volley	2,00	1,00	1,00
2	.	2,00	14,00	2,00	volley	2,00	2,00	1,00
3	.	2,00	15,00	2,00	volley	2,00	2,00	1,00
4	.	2,00	15,00	2,00	volley	2,00	2,00	1,00
5	.	2,00	14,00	2,00	volley	2,00	1,00	2,00
6	.	2,00	14,00	2,00	volley	2,00	2,00	1,00
7	.	2,00	14,00	2,00	volley	2,00	2,00	1,00
8	.	2,00	15,00	2,00	volley	2,00	2,00	1,00
9	.	.	.	.	.	.	.	.
10	.	2,00	15,00	2,00	volley	2,00	2,00	1,00
11	.	2,00	14,00	2,00	volley	2,00	2,00	1,00
12	.	2,00	12,00	1,00	podosfairo	2,00	2,00	1,00
13	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00
14	.	2,00	17,00	1,00	podosfairo	2,00	2,00	1,00
15	.	2,00	15,00	1,00	podosfairo	2,00	1,00	1,00
16	.	2,00	16,00	1,00	podosfairo	2,00	1,00	1,00
17	.	2,00	17,00	1,00	podosfairo	2,00	1,00	1,00
18	.	2,00	14,00	1,00	podosfairo	2,00	1,00	1,00
19	.	2,00	15,00	1,00	podosfairo	2,00	2,00	1,00
20	.	2,00	17,00	1,00	podosfairo	2,00	3,00	1,00
21	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00
22	.	2,00	16,00	1,00	podosfairo	2,00	2,00	1,00
23	.	2,00	17,00	1,00	podosfairo	2,00	3,00	1,00
24	.	2,00	17,00	1,00	podosfairo	2,00	3,00	1,00





- Click to **Insert variable**

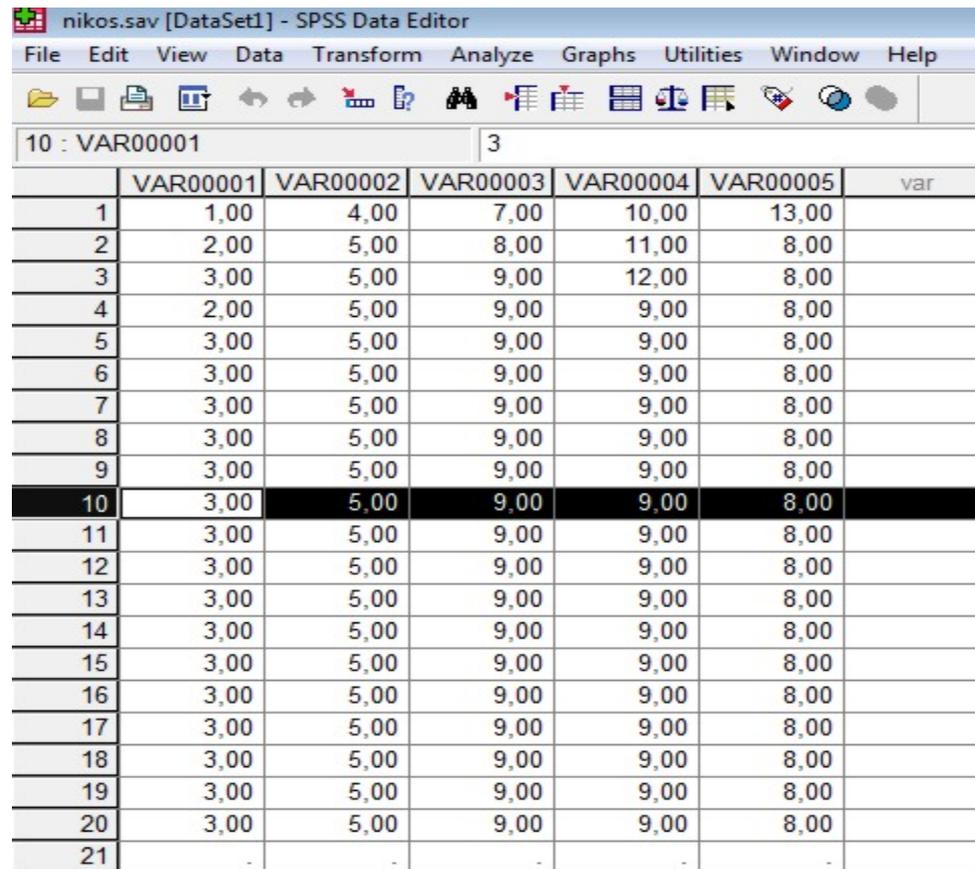
\*test.sav [DataSet1] - SPSS Data Editor

File Edit View Data Transform Analyze Graphs Utilities Window Help

1 : spotype 2 Insert Variable

	id	source	age	gender	sport	VAR00003	spotype	experien
1	.	2,00	14,00	2,00	volley	.	2,00	1,00
2	.	2,00	14,00	2,00	volley	.	2,00	2,00
3	.	2,00	15,00	2,00	volley	.	2,00	2,00
4	.	2,00	15,00	2,00	volley	.	2,00	2,00
5	.	2,00	14,00	2,00	volley	.	2,00	1,00
6	.	2,00	14,00	2,00	volley	.	2,00	2,00
7	.	2,00	14,00	2,00	volley	.	2,00	2,00
8	.	2,00	15,00	2,00	volley	.	2,00	2,00
9	.	.	.	.	.	.	.	.
10	.	2,00	15,00	2,00	volley	.	2,00	2,00
11	.	2,00	14,00	2,00	volley	.	2,00	2,00
12	.	2,00	12,00	1,00	podofairo	.	2,00	2,00
13	.	2,00	16,00	1,00	podofairo	.	2,00	2,00
14	.	2,00	17,00	1,00	podofairo	.	2,00	2,00
15	.	2,00	15,00	1,00	podofairo	.	2,00	1,00
16	.	2,00	16,00	1,00	podofairo	.	2,00	1,00
17	.	2,00	17,00	1,00	podofairo	.	2,00	1,00
18	.	2,00	14,00	1,00	podofairo	.	2,00	1,00
19	.	2,00	15,00	1,00	podofairo	.	2,00	2,00
20	.	2,00	17,00	1,00	podofairo	.	2,00	3,00
21	.	2,00	16,00	1,00	podofairo	.	2,00	2,00
22	.	2,00	16,00	1,00	podofairo	.	2,00	2,00
23	.	2,00	17,00	1,00	podofairo	.	2,00	3,00
24	.	2,00	17,00	1,00	podofairo	.	2,00	3,00

# Delete cases



nikos.sav [DataSet1] - SPSS Data Editor

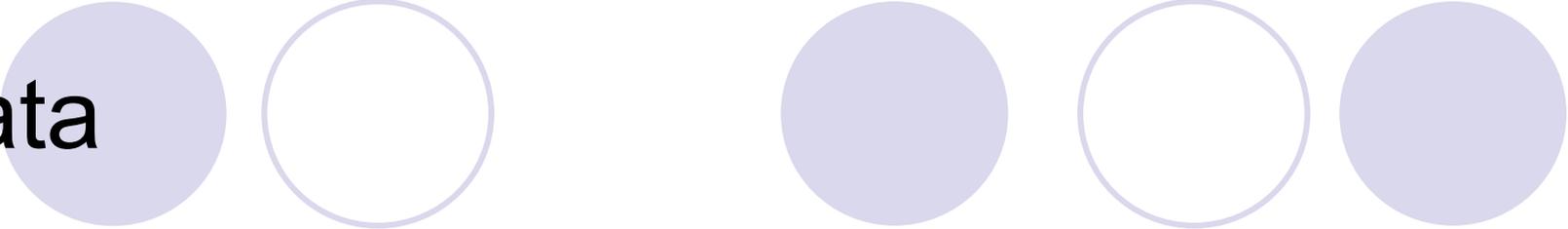
File Edit View Data Transform Analyze Graphs Utilities Window Help

10 : VAR00001 3

	VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	var
1	1,00	4,00	7,00	10,00	13,00	
2	2,00	5,00	8,00	11,00	8,00	
3	3,00	5,00	9,00	12,00	8,00	
4	2,00	5,00	9,00	9,00	8,00	
5	3,00	5,00	9,00	9,00	8,00	
6	3,00	5,00	9,00	9,00	8,00	
7	3,00	5,00	9,00	9,00	8,00	
8	3,00	5,00	9,00	9,00	8,00	
9	3,00	5,00	9,00	9,00	8,00	
10	3,00	5,00	9,00	9,00	8,00	
11	3,00	5,00	9,00	9,00	8,00	
12	3,00	5,00	9,00	9,00	8,00	
13	3,00	5,00	9,00	9,00	8,00	
14	3,00	5,00	9,00	9,00	8,00	
15	3,00	5,00	9,00	9,00	8,00	
16	3,00	5,00	9,00	9,00	8,00	
17	3,00	5,00	9,00	9,00	8,00	
18	3,00	5,00	9,00	9,00	8,00	
19	3,00	5,00	9,00	9,00	8,00	
20	3,00	5,00	9,00	9,00	8,00	
21	-	-	-	-	-	



# Data



- Sort cases. Sort the values of one or more variables in an ascending or descending order. Using this option you can group together for example gender 1 males and then 2 females.
- Select cases. Analyze separately for example females. Select cases, click of the variable of interest (e.g., females) then click *If condition is satisfied*. Then click *If...* select gender and click on the arrow button to move it to the opposite box. Type gender = 2, click *continue* and then *ok*

Time for practice

