SPSS (Statistical Package for the Social Sciences)

What is SPSS?

- SPSS stands for "Statistical Package for the Social Sciences"
- The SPSS home-page is: www.spss.com

What can you do with SPSS?

- Run Frequencies
- Calculate Descriptive Statistics
- Compare Means
- Conduct Cross-Tabulations
- Recode Data
- Create Graphs and Charts
- Do T-Tests
- Conduct ANOVAs
- Run Various Type of Regressions And Much More!

Bringing your data into SPSS:1. Go to "File" then "Open" and click on "Data"

🗰 Untitled - SPSS Data Editor								J 🗙
File Edit View Data Transform	Analyze Graph:	s Utilities Wind	dow Help					
New 🕨		● ● ■	n e 80	ol				
Open	Data	Desimala			Miccing	Columno	Alian	
Read Text Data	Output	Decimais	Labei	values	wissing	Columns	Aligh	
	Script							
Save Ctrl+S	Other							
Display Data Info								
Cache Data								
Print Ctrl+P								
Print Preview								
Switch Server								
Stop Processor Ctrl+.								
Recently Used Data 🔹 🕨								
Recently Used Files								
Exit								
14								
15								
16								
17								
18								
- 19								
20								
22								
23								-
✓ ► Data View Variable View	V	_	•					
	SPSS Pro	cessor is ready						
🛃 start 🔰 🔜 wIntegrate	V3.0, Por	🛗 Untitled - SP	SS Data				K 11:	25 AM

SPSS has three parts/windows:

- **Data** where you enter the data (.sav)
- Syntax where details of the analyses you are going to do are displayed (.sps)

Viewer/Output

- where the results are displayed (.spo)
- any messages (such as errors) are displayed in this window
- you must always have a data window open, and you do not have to use the syntax window
- if an output window is open, messages appear in this, and it remains where it was (e.g. behind the data screen)

Opening SPSS:

When you open SPSS, a data window will open

At the bottom are two tabs:

- data view: gives title of each variable at top, and allows you to enter your data, case by case
- variable view: gives the details of each variables, and
 allows you to define/describe the variables in your research
- e.g., in a questionnaire survey:
 - the variables are the questions you want to enter data under and go along the top
 - the cases are the people who returned questionnaires and go down the side

If you look at the botton left, you'll see tabs for Data View and Variable View

🗰 Untit	led - SPSS	Data Editor								_ 7 🗙	
File Edit View Data Transform Analyze <mark>Graphs</mark> Utilities Window Help											
2	s	o a L	<u>- • • • • • • • • • • • • • • • • • • •</u>	¥ 4	2						
1:id 0517956											
	id	common_a	home_cit	st	zip	citizens	scho	applied	totinaid	<u> </u>	
1	0517956	0	Arlington	Μ	02474		CAS	0	0	BS/OPE	
2	0539002	0	Revere	Μ	02151		CAS	1	1800	BS/OPE	
3	0602013	0	Amesbury	Μ	01913		CAS	1	0	BS/ECC	
4	0603824	0	Woodbury	Ν	11797		CAS	0	0	BS/OPE	
5	0618436	0	Concord	Μ	01742		CAS	0	0	BS/OPE	
6	0637003	0	Revere	Μ	02151		SSO	1	2200	BSBA/A	
7	0651833	0	Framingham	Μ	01701		CAS	1	0	BFA/INT	
8	0669238	0	Seekonk	Μ	02771		CAS	0	0	BSAAISU	
9	0708485	0	Brighton	Μ	02135		SSO	1	4200	BSBA/A	
10	0711997	0	Salem	Ν	03079		SSO	1	0	BSBA/I	
11	0715175	1	Cali				CAS	0	0	BS/OPE	
12	0715502	0	Colchester	С	06415		CAS	1	2000	BS/PRI	
13	0717060	0	Suffield	С	06078		CAS	1	0	BS/PUE	
14	0722368	0	Cambridge	Μ	02139	SENEGAL	SSO	0	0	BSBA/C	
15	0726376	0	West Redding	С	06896		CAS	1	0	BS/OPE	
16	0730401	0	Revere	Μ	02151		CAS	1	2000	BS/BRC	
17	0737318	0	Revere	Μ	02151		SSO	0	0	BSBA/C	
18	0737640	0	Taunton	Μ	02780		CAS	1	2900	BS/POL	
19	0738036	0	Canton	Μ	02021		CAS	1	0	BS/POL	
20	0739190	0	South Boston	Μ	02127		CAS	1	1500	BS/CRIN	
21	0746951	1	Berkeley Height	NJ	07922		CAS	0	0	BS/ELE	
	ata View 🖌	Variable View	7	K.A	00405		010	4	2000		
SPSS Processor is ready											

Using SPSS

This involves three steps:

1) set up data sheet

2) enter data

3) run analyses

Step 1: Set up a data sheet

This step involves defining/describing the variables of your research. To do this:

- a) ensure are in variable view (tab at bottom of window; double click title at top)
- b) enter name of variable
 - must start with a letter and contain no spaces (but can contain numbers and symbols)
 - can be up to 8 characters in length

After you have created a variable (through entering its name), the rest of the options appear

Step 1: Set up a data sheet . . . cont

c) define/describe variable

To do this, click on the cell you wish to change and one of three things will appear:

- blank cell (type whatever you want)
- numbers with up/down arrows (adjust till preferred option appears)
- word (e.g., name, right, scale; when select cell, a box with dots appears on right click on this for more options

Step 1: Set up a data sheet . . . cont

- type type of variable (numeric, string etc)
- width how many characters do you want to be able to enter
- decimals how many decimal places do you want
- label full name for the variable
- values labels for variables (e.g., 1=male, 2=female)
- missing allows you to determine which numbers will be treated as missing data when doing analyses
- columns defines how wide the column display is

alignment how do you want the columns to align

measure options of scale (ordinal, nominal)

Step 2: Enter data

- entering data is very similar to entering data into excel (and data can be copied between excel and SPSS)
- the type of variable you have chosen will effect what you may enter (e.g. numbers vs letters)
 - you can't type letters into a numeric variable, but can type numbers into a string variable
 - use arrows or tab key to move if you use tab then when reach the end of the row will return to the start of the next one
 - you can cut and paste within SPSS
 - you can sort cases (data/sort cases)
 - you can insert variables or shift the order of variables (data/insert variable)

Step 3: Analyses

- decide what analyses to do using menus under analyze
 - usually will choose type of analysis, then which variables you wish to include
 - variables are displayed by their variable label (with the variable name in brackets), in the order they are in the data window
 - will also get options specific to each analysis, such as the type of information you want included, or the specific tests you want done
- then have choice of OK (run analysis) or paste (will paste analysis to syntax window for you to deal with later)

Step 3: Analyses . . . cont

- using syntax files:

- disadvantages: extra window open

extra stage in process

- advantages: can save syntax files

can make changes at this stage

When wish to run analyses, have four options (under run on menu bar):

- run all analyses
- run selected analyses
- run current analysis (shortcut key is 'play' symbol)
- run to end (analyses from cursor to end of page)

Step 3: Analyses . . . cont

Some things to remember:

- string variables can't be analysed, but you can sort using them; they can also be turned into numeric variables using the 'computer' function
- each type of window (data, syntax, output) has slightly different menu options

- the ANOVAs are found under General Linear Model; however, one-way ANOVAs are found under compare means

Output

- in the output window the results of the analysis are displayed

- from here you can alter, delete, print etc

-the column to the left has a summary of the analyses/messages, the one on the right the actual analyses/messages

-analyses can be selected in either column

-you can adjust headings by double clicking on the titles in either column - however it only changes in the column in which you selected it. If you wish to add headings before printing, make changes in the right hand column

Useful information:

Printing - all windows (data, output, syntax) can be printed

the printout is very large, students may wish to reduce the size to print (I use 50% for data and 75% for output files)

-ensure the page set up is correct!

-large tables etc will wrap on the page when printed

More options:

There are many more options in the menus, for example:

Data menu:

- transpose: new data file switching cases/variables
- merge files: combines two data files
- aggregate: combine cases/variables in a new data file
- split files: look at results breaking down by variables
- select cases: choose only certain cases and then run analyses on these

And yet more options:

Transform menu

- compute: compute new values for numeric/string data
 create new variables
 replace the values of existing variables
 use provided functions/formulae to change values
- recode: can change data values and recode the data into the same or different variables
- many options enable you to use if statements