

Block 2: Analysing one variable

Nominal and ordinal variables

2.1.2.5 Extending your data dictionary

[23 November 2010]

Previous session: 2.1.2.4 Reading in data for nominal and ordinal variables

Exemplar: [British Social Attitudes](#) (1986 survey)File: [mybsa86_1.sav](#) (British Social Attitudes 1986, 1st saved file)

- Task:
- 1: Add missing values, variable labels and value labels for **v541** (Satisfaction with the way the NHS runs nowadays) and **v1510** (Marital status of respondent)
 - 2: Save the contents of the data editor in a ***.sav** file and the syntax editor in a ***.sps** file.

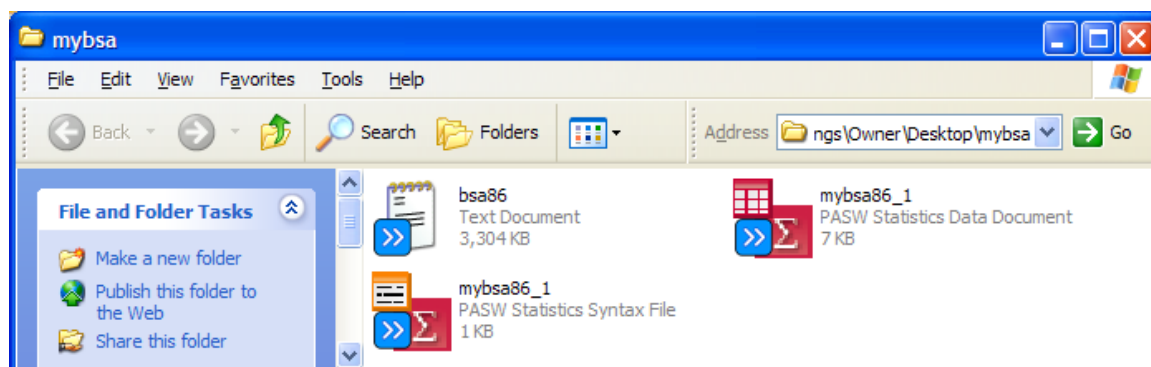
SPSS syntax used¹:

TITLE

MISSING VALUES

VARIABLE LABELS

VALUE LABELS

Open your folder **mybsa**:¹ General formats:

TITLE

' <Any text> ' .

MISSING VALUES

```
<variable list> (<value list> )
/ <variable list> (<value list> )
/ ~ ~ ~ ~ .
```

[See 1.4.3 for more details]

VARIABLE LABELS

```
<variable name1> ' <variable label1> '
/ <variable name2> ' <variable label2> '
/ ~ ~ ~ ~ .
```

VALUE LABELS

```
< variable name(s) > <value1> ' <label1> '
                        <value2> ' <label2> '
                        ~ ~ ~ ~
/ < variable name(s) > <value1> ' <label1> '
                        ~ ~ ~ ~ .
```

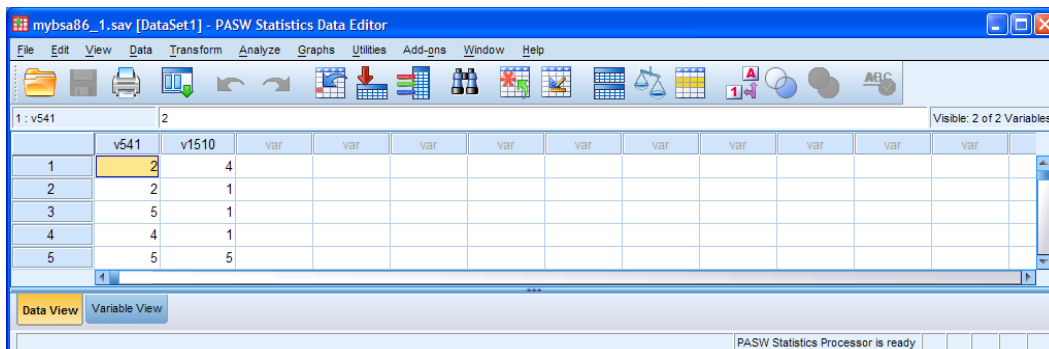
. . . and double-click on **mybsa86_1.sav** (the one with the red check design) you saved in the previous session.

[If you don't already have folder **mybsa86** or file **mybsa86_1.sav** go back to the [Block 2 menu](#) and do the exercises in [2.1.2.3](#) and [2.1.2.4](#).]

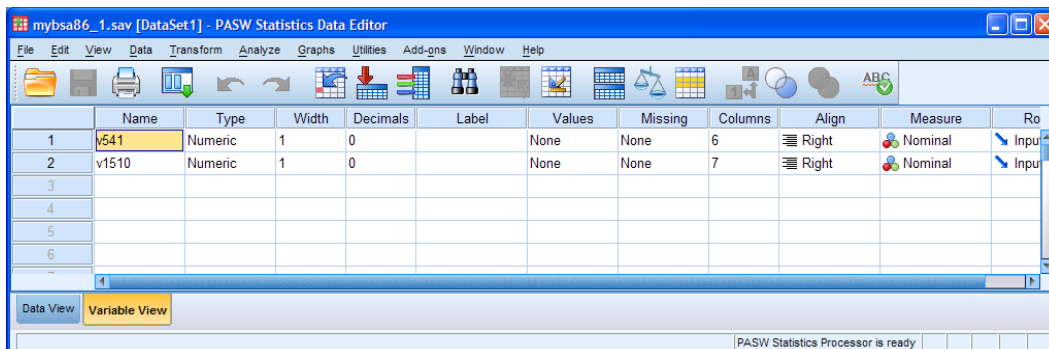
SPSS automatically generates the following syntax and displays it in the output file.

```
GET
  FILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_1.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
```

. . . and the data editor will open in whichever view it was last used.



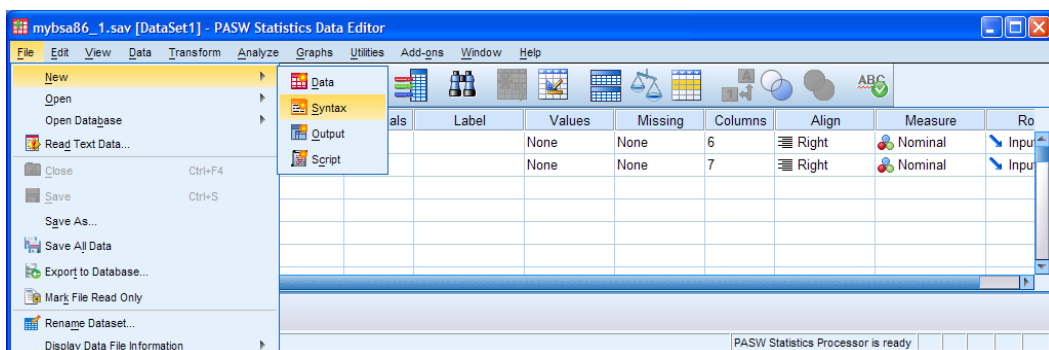
Data View



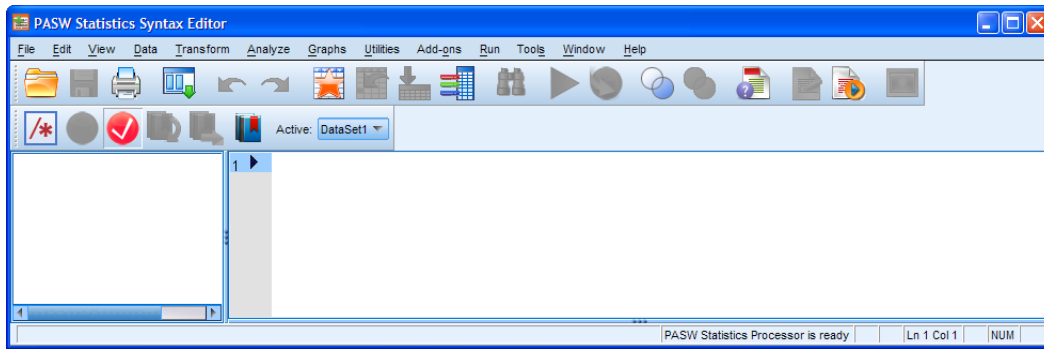
Variable View

Check that your variables **v541** and **v1510** have been defined and that the data are present (ie both views should tally with the screenshots above):

In **Variable View** click on **File** > **New** > **Syntax**



. . . to open a new syntax editor:



Before reading on, try writing out the syntax in the space below for **TITLE**, **MISSING VALUES**, **VARIABLE LABELS**, and **VALUE LABELS**.

Don't forget the primes, slashes and full stops!

TITLE _____ .

MISSING VALUES _____ .

VARIABLE LABELS _____ .

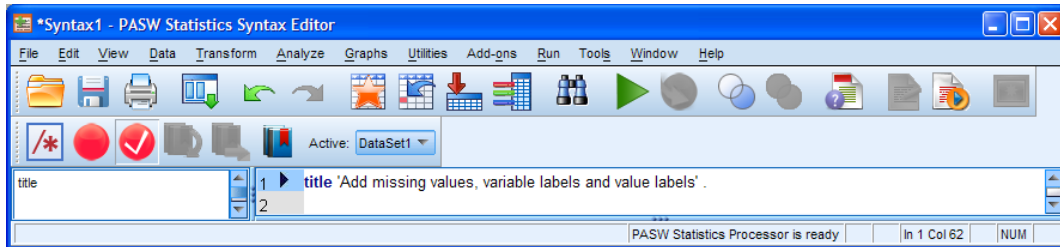
VALUE LABELS _____ .

Now let's continue building our file by extending the data dictionary.

1: **TITLE²**

Again, good practice is to give your job a title.

title 'Add missing values, variable labels and value labels' .



Click on the

green ►

The output will display:

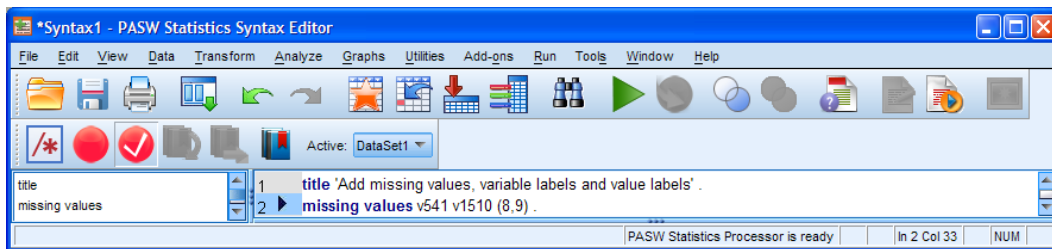
```
GET
  FILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_1.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
title 'Add missing values, variable labels and value labels' .
```

2: **MISSING VALUES³**

Your syntax for **MISSING VALUES** should look like this (values 8 and 9 are missing for both):

missing values v541 v1510 (8,9) .

Type this command on the next line. (Start in column 1 and don't forget the full stop):



² General format:

TITLE '<Any text you like>' .

³ **MISSING VALUES** <variable list> (<value list>)
 / <variable list> (<value list>)
 / ...

where <value list> can be:

(i) up to three numeric or alphanumeric values separated by commas or blank spaces

(ii) for numeric values only, a **range** of the form:

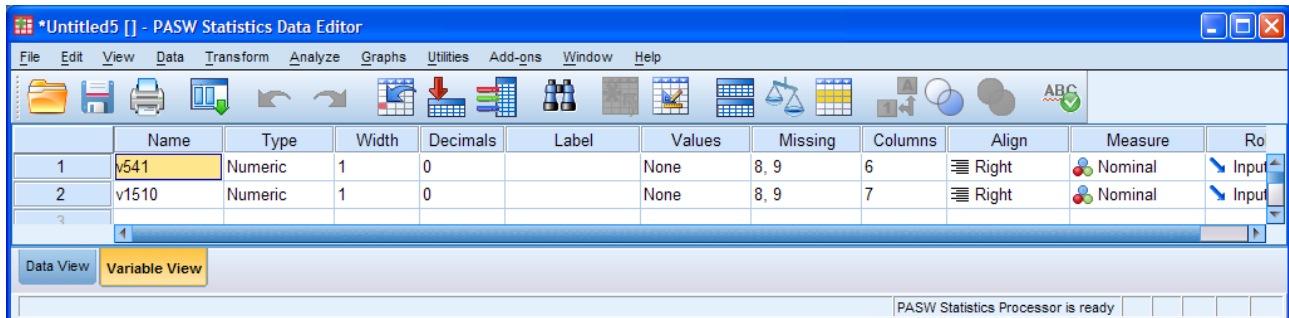
<value> **THRU** <value>
LOWEST THRU <value>
<value> **THRU HIGHEST**

If you have made errors, part or all of the command will be displayed in **red**. Once you are happy with the syntax click on the green ► to run the job.

The output will display your syntax so far:

```
GET
  FILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_1.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
title 'Add missing values, variable labels and value labels' .
missing values v541 v1510 (8,9) .
```

... and the values **8** and **9** will appear in the **Missing** column in the data editor:



Variable View after missing values added

3: VARIABLE LABELS⁴

Your syntax for **VARIABLE LABELS** should look something like this :

variable labels

v541 'Q.58 Satisfaction with running of NHS'
/v1510 'Q113.b marital status of respondent' .

Type this command carefully into the syntax editor, making sure you put in the primes (apostrophes) and the full stop (period).



⁴ General format:

VARIABLE LABELS <variable name> ' <variable label> '
 / <variable name> ' <variable label> '
 / ~ ~ ~ ~

Example:

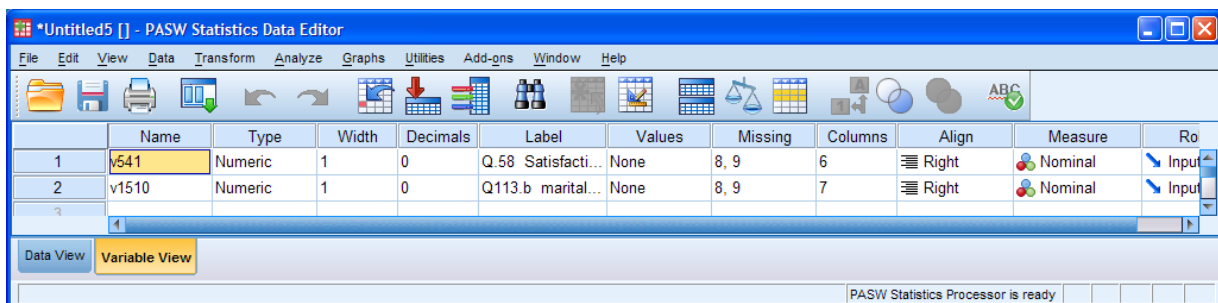
variable labels **sex** 'Q98a Sex of respondent'
 / v759 'Q96a Should homosexuals teach in school?' .

If you have made errors, part or all of the command will be displayed in **red**. Once you are happy with the syntax click on the green ► to run the job.

The output will display your syntax so far:

```
GET
  FILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_1.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
title 'Add missing values, variable labels and value labels' .
missing values v541 v1510 (8,9) .
variable labels
  v541 'Q.58 Satisfaction with running of NHS'
/v1510 'Q113.b marital status of respondent' .
```

... and the **Labels** column in the data editor will have filled up with your own labels.



Variable View after variable labels added

[The labels are masked, but we can deal with that after the next step.]

4: **VALUE LABELS**⁵

Your syntax for **VALUE LABELS** should look something like this:

value labels

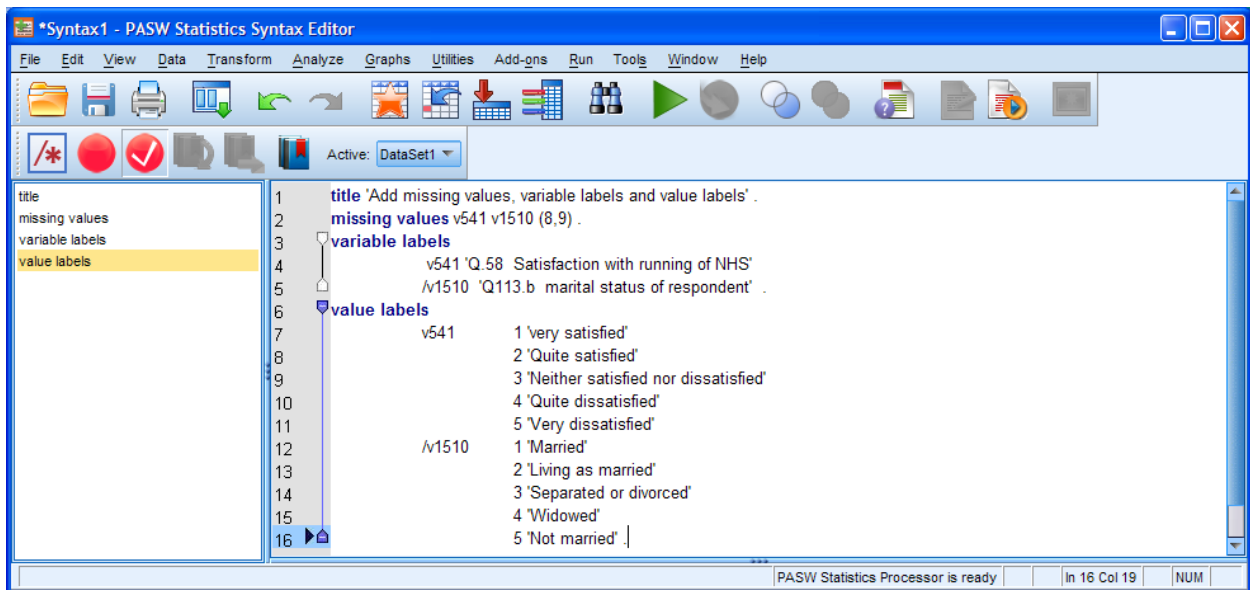
```
v541 1 'Very satisfied'
      2 'Quite satisfied'
      3 'Neither satisfied nor dissatisfied'
      4 'Quite dissatisfied'
      5 'Very dissatisfied'
/v1510 1 'Married'
        2 'Living as married'
        3 'Separated or divorced'
        4 'Widowed'
        5 'Not married' .
```

Type this command **very** carefully into the syntax editor paying particular attention to the primes (apostrophes) and the full stop (period) at the end .

⁵ **General format:**

```
VALUE LABELS < variable name(s) > <value1> ' <label> '
                                     <value2> ' <label> '
                                     ~ ~ ~ ~
/ < variable name(s) > <value1> ' <label> '
                        ~ ~ ~ ~
```

Example: value labels sex 1 'Men' 2 'Women'
/v1374 to v1379 v1470 v1509 to v1510 1 'Yes' 2 'No' .



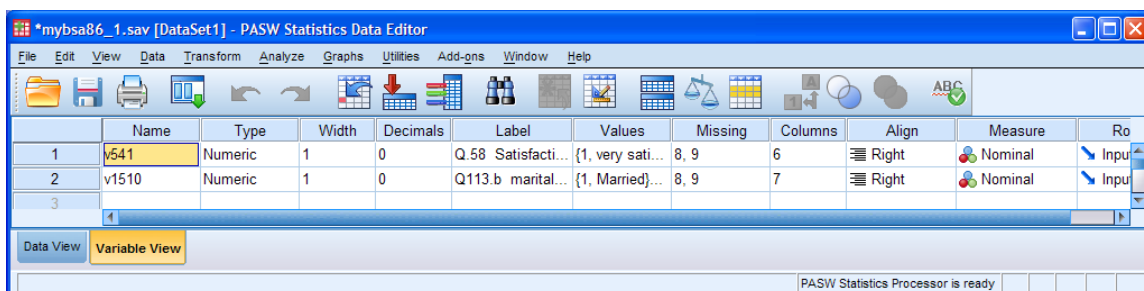
If you have made errors, part or all of the command will be displayed in **red**. Once you are happy with the syntax click on the green ► to run the job.

The output will display your syntax so far:

```
GET
FILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_1.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
title 'Add missing values, variable labels and value labels' .
```

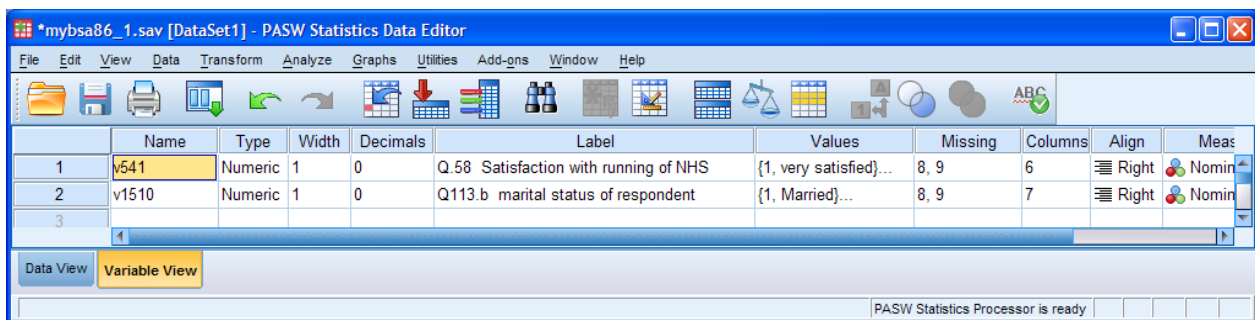
```
missing values v541 v1510 (8,9) .
variable labels
  v541 'Q.58 Satisfaction with running of NHS'
  /v1510 'Q113.b marital status of respondent' .
value labels
  v541 1 'Very satisfied'
        2 'Quite satisfied'
        3 'Neither satisfied nor dissatisfied'
        4 'Quite dissatisfied'
        5 'Very dissatisfied'
  /v1510 1 'Married'
          2 'Living as married'
          3 'Separated or divorced'
          4 'Widowed'
          5 'Not married' .
```

... and the **Values** column will have filled up in a slightly different way:

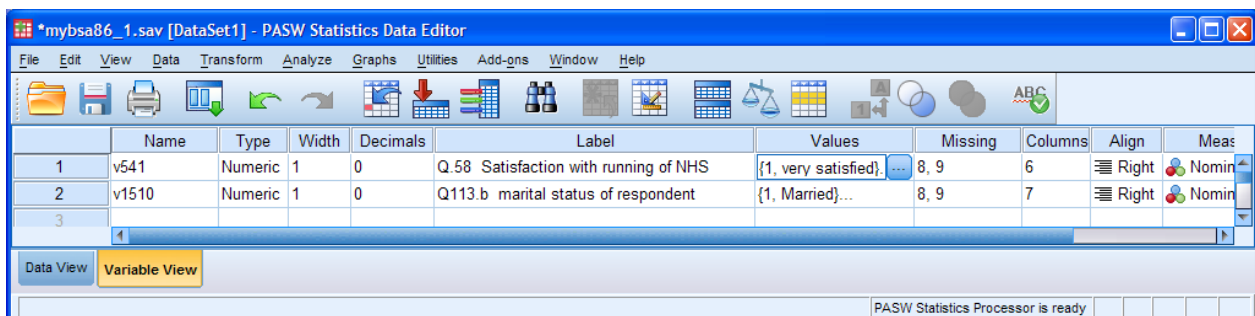



Variable View after **value labels** added

The labels are again masked, but you can slide the column separators sideways to reveal them and adjust the other columns at the same time. This makes it easier to see everything.



Unfortunately, this adjusted display cannot be saved and the data editor will revert to the default after you close it or leave SPSS. If you want see the value labels for a variable, you can click on the appropriate cell in the **Values** column, so for **v541** (Satisfaction-dissatisfaction with the running of the NHS)

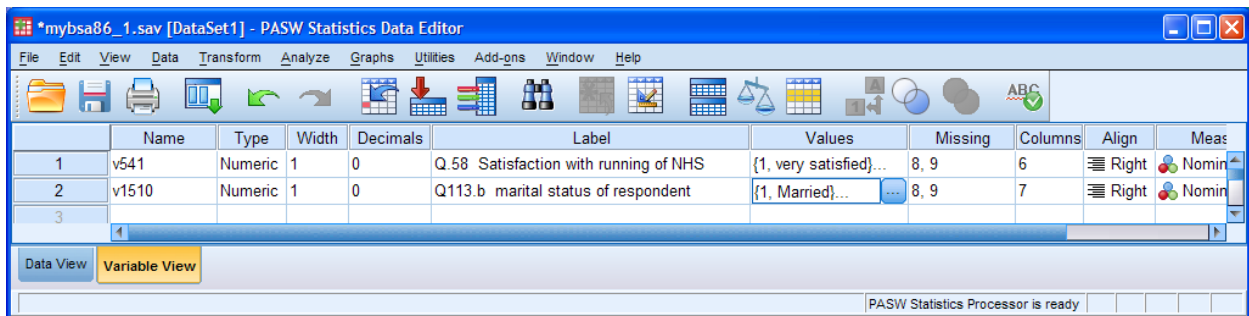



... and then click on the blue square  to reveal the labels:



You can add, delete or edit the labels inside this box, but hopefully you got them correct in the syntax before you ran it!

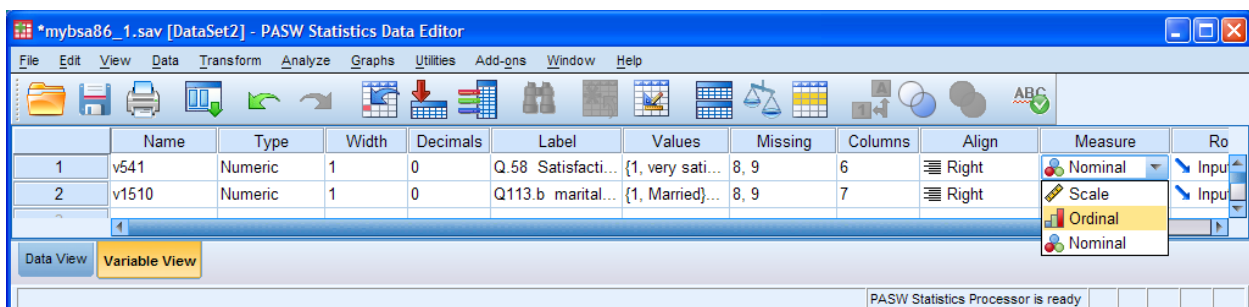
For **v1510** (Marital status of respondent) click on the cell:



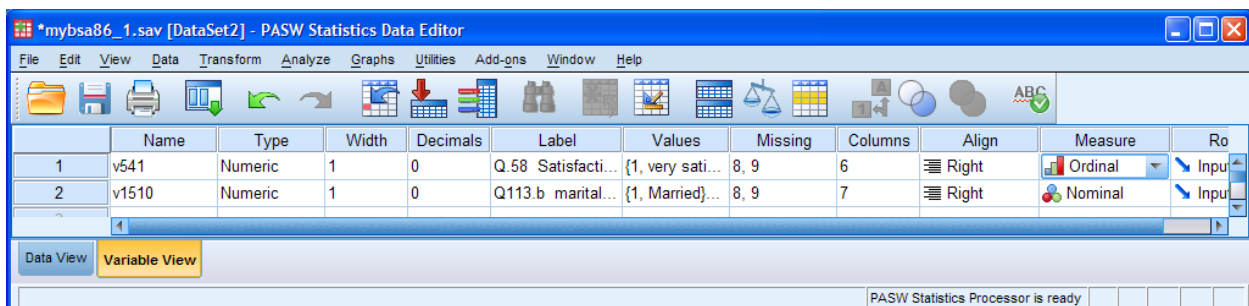
... then click on the blue square 



There's a bit more tidying up to do because **v541** has been classified as **Nominal**, but you can change it to **Ordinal** by clicking on the cell:



and choosing **Ordinal**

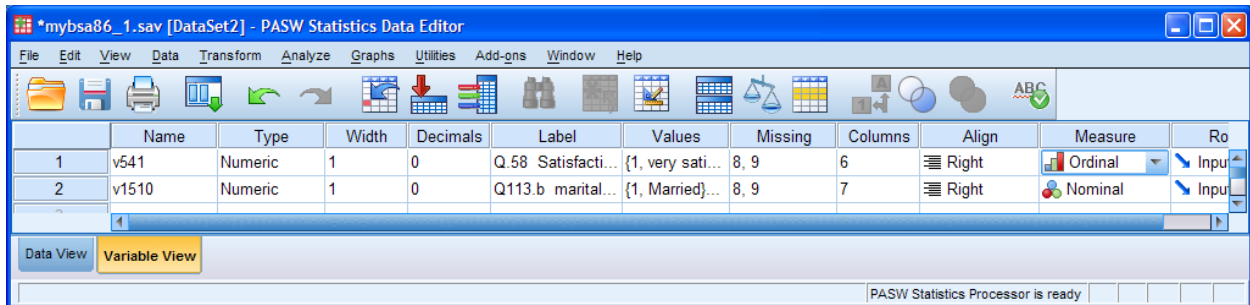


We have now finished building the first edition of the basic file, complete with all data and basic data dictionary.

Before we go any further, good file management practice is to save the data editor again.

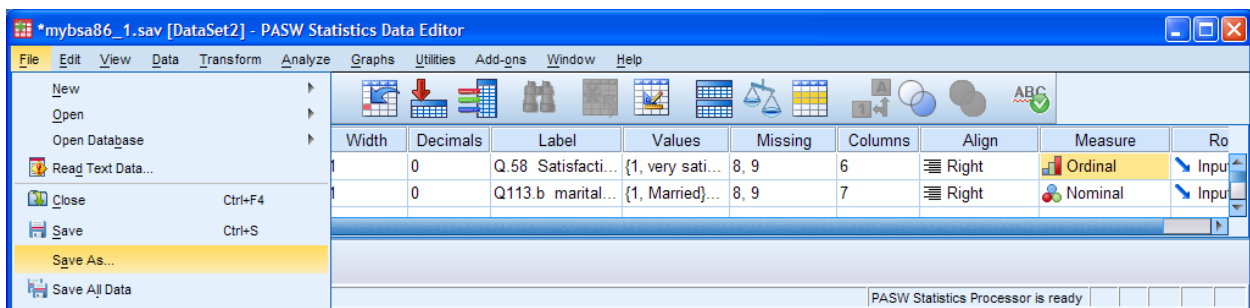
Since the data editor originally opened file **mybsa86_1.sav** from folder **mybsa**, one method (not advised here) would be to click on the **save** icon in the toolbar. This would update the existing saved file **mybsa86_1.sav** and the data editor would remain on your screen.

The title in the data editor would change from ***Untitled...** to **mybsa86_1.sav [Data set 1]**



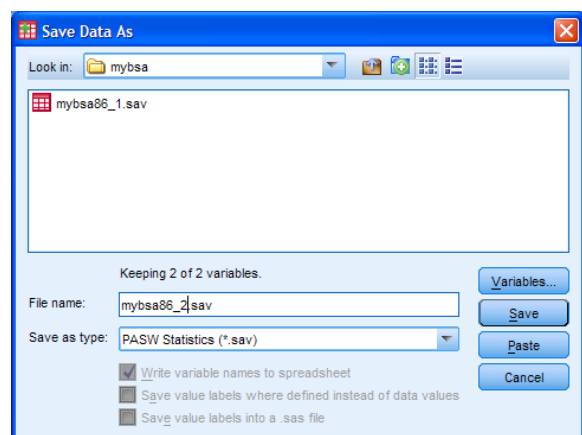
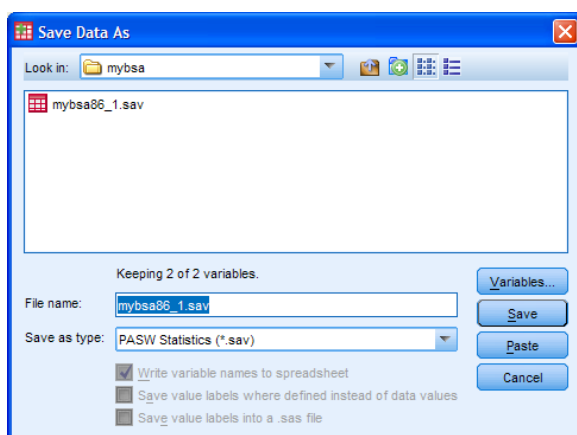
However, my preference is not to overwrite the original saved file, but to save the current data editor in a new saved file with different (incremental) name. With a small data set like this it doesn't matter so much, but with larger data sets it's good practice to build up files in stages. It's preferable therefore to save the current data editor as **mybsa86_2.sav** and the syntax editor as **mybsa86_2.sps**. This way you can keep track of your work and there's always the previous version of the file to fall back on.

Click on **File > Save As ...**



Navigate to your **mybsa** folder where file **mybsa86_1** was saved last time:

... and change **mybsa86_1.sav** to **mybsa86_2.sav** in the **File name:** box

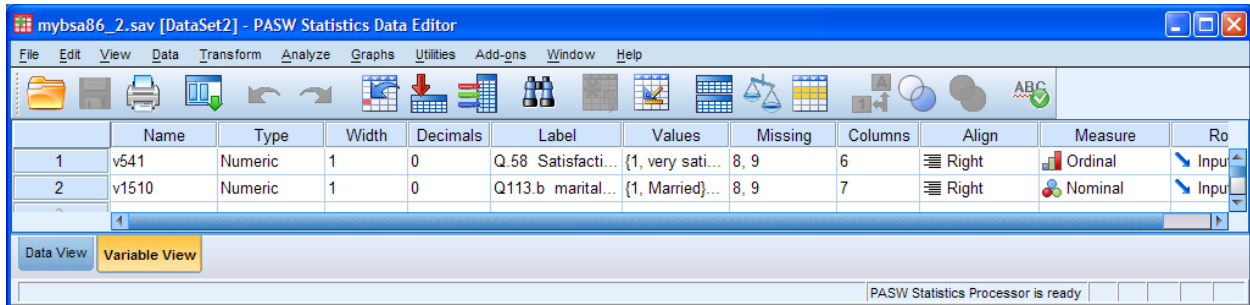


Make sure **PASW Statistics (*.sav)** is displayed in the **Save as type:** box and click on **Save**

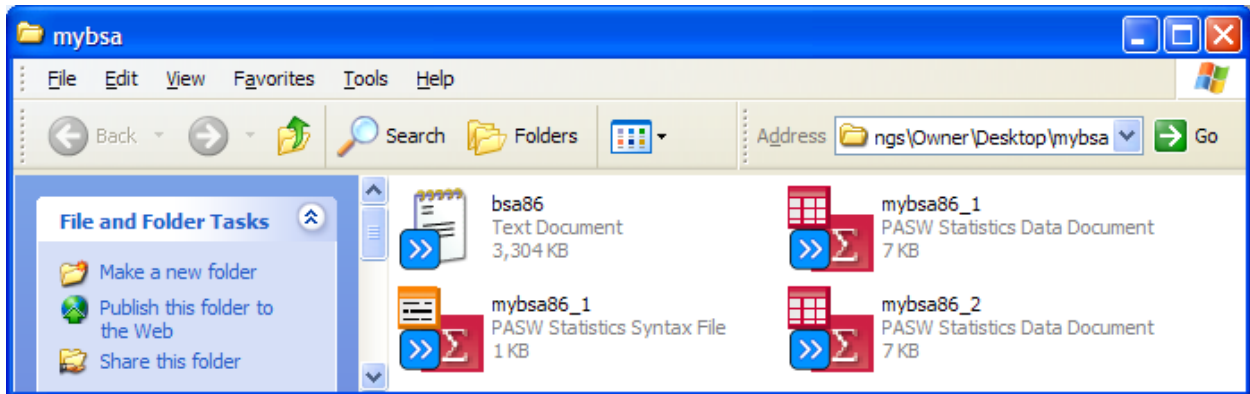
SPSS automatically generates the following syntax and displays it in the output file.

```
SAVE OUTFILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_2.sav'  
/COMPRESSED.
```

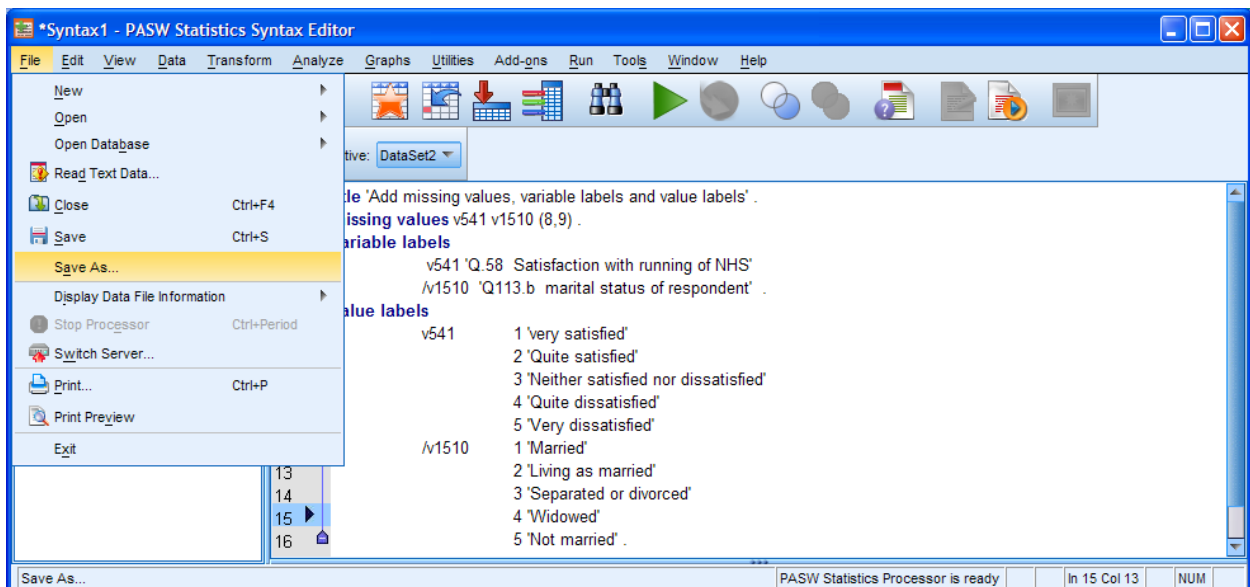
The data editor name will change to **mybsa86_2.sav**



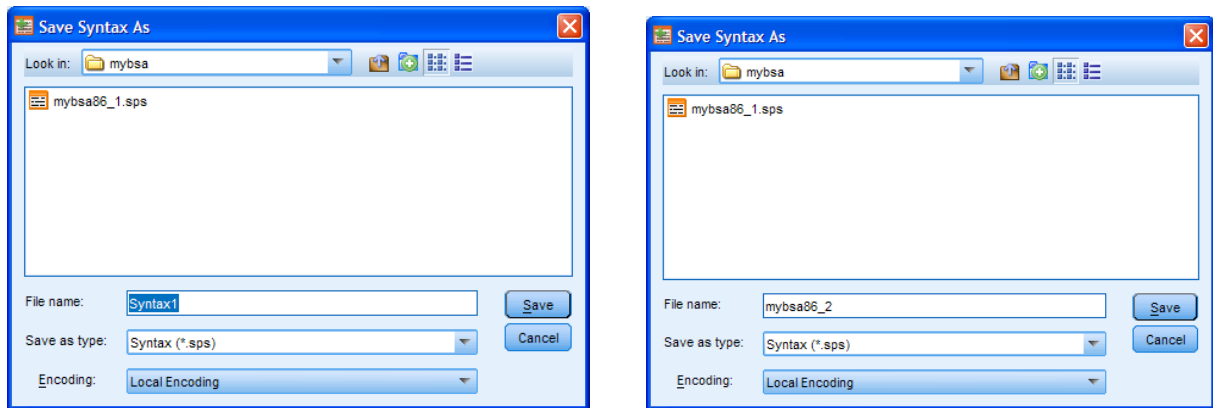
and folder **mybsa** will now have both editions of the saved file.



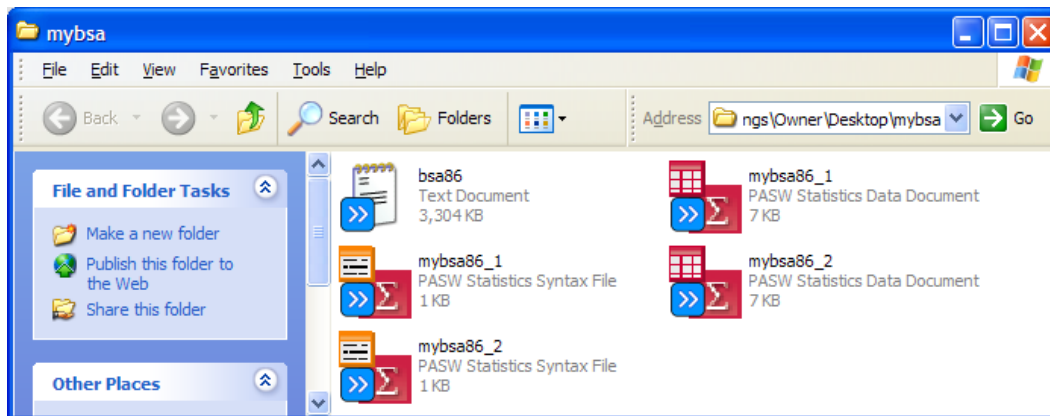
Now go back to the syntax editor and click on **File > Save As ...**



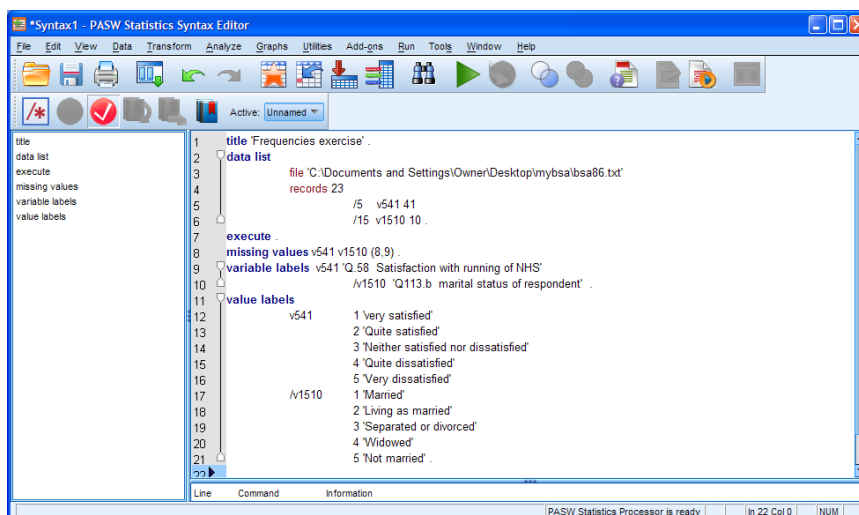
As before, files of the same type are displayed, in this case **mybsa86_1.sps**. Change **Syntax1** to **mybsa86_2** in the **File name:** box [other previously used filenames may appear] . . .



Make sure **Syntax (*.sps)** is displayed in the **Save as type:** box and click on **Save**



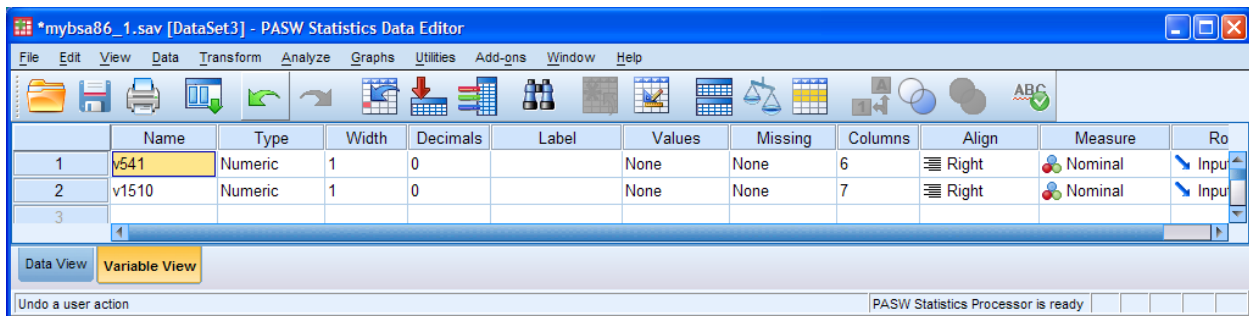
If you wanted, you could have typed in all the syntax:



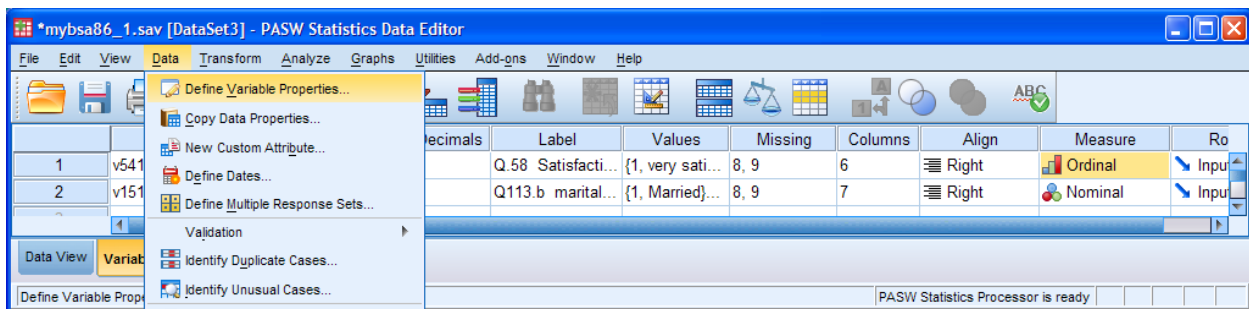
. . . and run everything in one pass with **Run > All**

You could also have typed the missing values and variable labels directly into the appropriate cells in the data editor, but value labels are more complicated (and tedious) to enter this way. You could also use the menus, but that's even more tedious. If you don't believe me, try it and you'll see why!

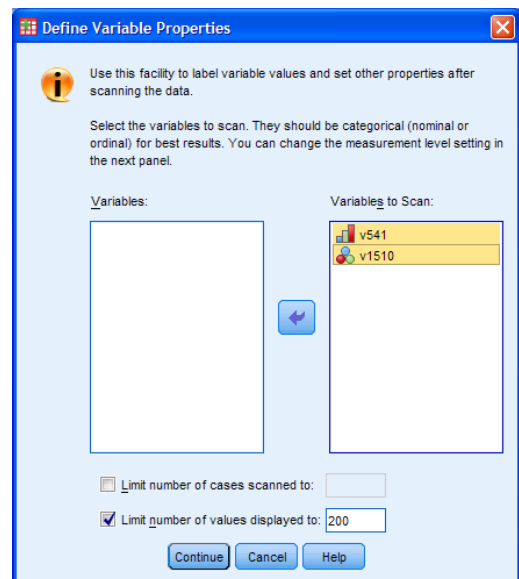
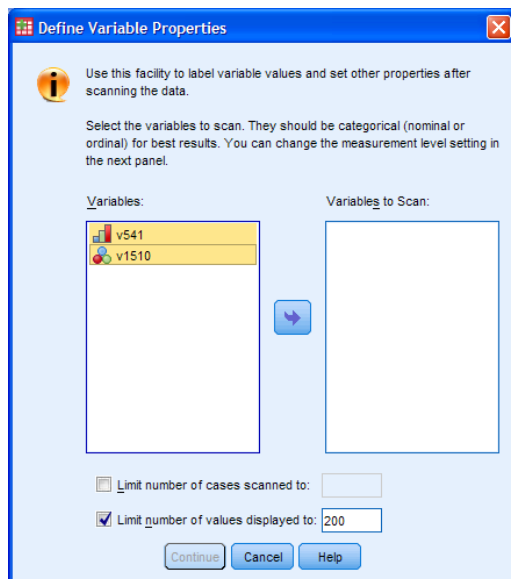
Go back to folder **mybsa** and open **mybsa86_1.sav**.



Click on **Data** > **Define Variable Properties**



Highlight both variables and click on the **blue arrow** to drag them across and click on **Continue**:



Information is displayed for the first variable **v541**:

Define Variable Properties

Scanned Variable List

Un...	Me...	Role	Variable
<input checked="" type="checkbox"/>			v541
<input checked="" type="checkbox"/>			v1510

Current Variable: v541 Label: Q.58 Satisfaction with running of NHS

Measurement Level: Ord... Suggest Type: Numeric Width: 1 Decimals: 0

Role: Input Unlabeled values: 2

Value Label grid: Enter or edit labels in the grid. You can enter additional values at the bottom.

	Changed	Missing	Count	Value	Label
1	<input type="checkbox"/>	<input type="checkbox"/>	200	1	very satisfied
2	<input type="checkbox"/>	<input type="checkbox"/>	1050	2	Quite satisfied
3	<input type="checkbox"/>	<input type="checkbox"/>	597	3	Neither satisfied nor diss...
4	<input type="checkbox"/>	<input type="checkbox"/>	721	4	Quite dissatisfied
5	<input type="checkbox"/>	<input type="checkbox"/>	517	5	Very dissatisfied
6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11	8	
7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4	9	
8	<input type="checkbox"/>	<input type="checkbox"/>			

Cases scanned: 3100 Value list limit: 200

Copy Properties: From Another Variable... To Other Variables... Unlabeled Values: Automatic Labels

OK Paste Reset Cancel Help

Click on **v1510** to get:

Define Variable Properties

Scanned Variable List

Un...	Me...	Role	Variable
<input checked="" type="checkbox"/>			v541
<input checked="" type="checkbox"/>			v1510

Current Variable: v1510 Label:

Measurement Level: Nomi... Suggest Type: Numeric Width: 1 Decimals: 0

Role: Input Unlabeled values: 6

Value Label grid: Enter or edit labels in the grid. You can enter additional values at the bottom.

	Changed	Missing	Count	Value	Label
1	<input type="checkbox"/>	<input type="checkbox"/>	2059	1	
2	<input type="checkbox"/>	<input type="checkbox"/>	81	2	
3	<input type="checkbox"/>	<input type="checkbox"/>	164	3	
4	<input type="checkbox"/>	<input type="checkbox"/>	284	4	
5	<input type="checkbox"/>	<input type="checkbox"/>	502	5	
6	<input type="checkbox"/>	<input type="checkbox"/>	10	9	
7	<input type="checkbox"/>	<input type="checkbox"/>			

Cases scanned: 3100 Value list limit: 200

Copy Properties: From Another Variable... To Other Variables... Unlabeled Values: Automatic Labels

OK Paste Reset Cancel Help

At least you get a quick count of the number of cases in each category and a quick check on the values present for each variable!

End of session:

Next session: 2.1.2.6 Checking your file contents

[\[Back to Block 2 menu\]](#)