



**GHICHI ALI**

السنة الدراسية 2017 - 2018



## (Data editing)

تحرير البيانات

- Creating/calculating a new variable

• استحداث/ حساب متغير جديد

Suppose that the researcher would like to include an extra column in the example which indicates the **'body-mass index (BMI)'**. The BMI is defined as the body weight in kilograms divided by the square of the height in metres. let use the table below:

Table 1.1

Name	Gender	Height (cm)	Weight (kg)
Joseph	1	180	75
Caitlin	0	165	67
Charles	1	175	80
Catherine	0	170	70
Peter	1	185	75

The path to be followed to calculate an additional variable is **Transform/Compute Variable**

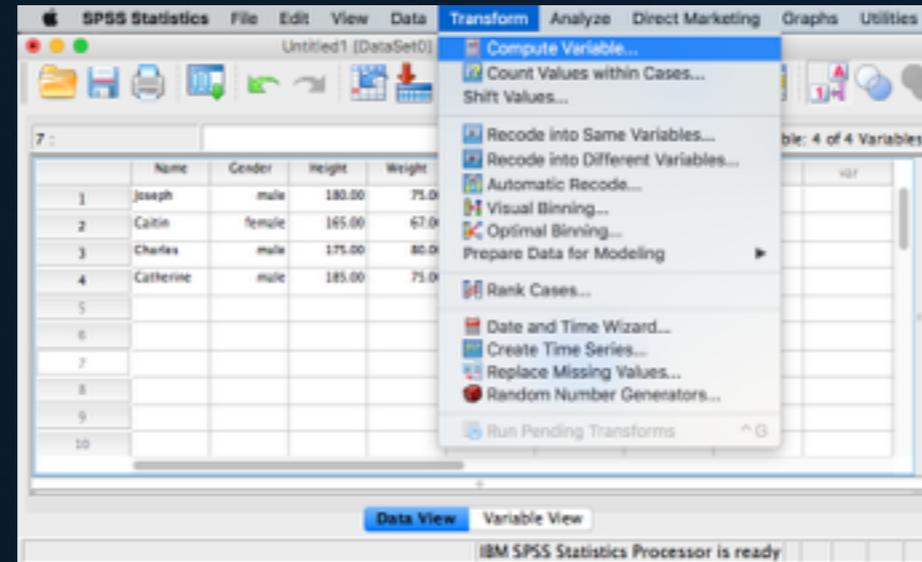


## (Data editing)

تحرير البيانات

## • Creating/calculating a new variable

• استحداث/ حساب متغير جديد



A dialogue window will be displayed



## (Data editing)

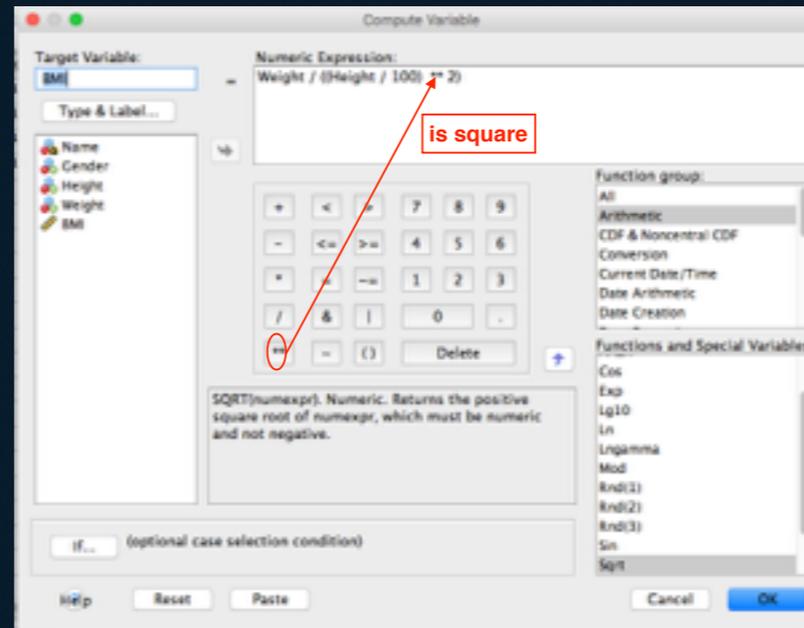
## تحرير البيانات

## • Creating/calculating a new variable

## • استحداث/ حساب متغير جديد

1. type the name of the new variable (BMI in this case)
2. In the 'Numeric Expression' field, type the formula .
3. you may also select the variable names from the left box and click the button). 
4. click OK

5. The new variable will now be shown in the 'Data View' screen



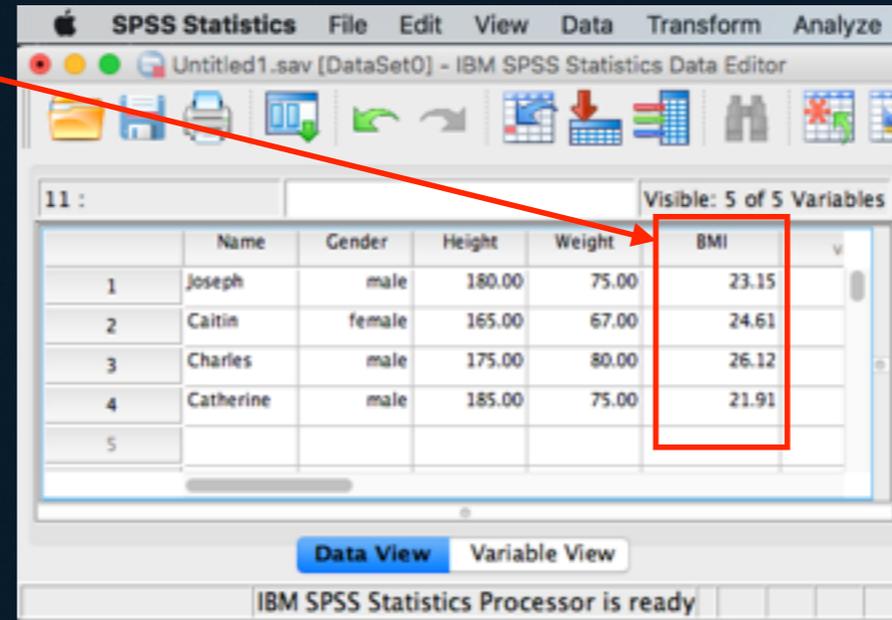
(Data editing)

تحرير البيانات

• Creating/calculating a new variable

• استحداث/ حساب متغير جديد

The new variable



The screenshot shows the SPSS Statistics Data Editor window. The menu bar includes File, Edit, View, Data, Transform, and Analyze. The title bar indicates the file is 'Untitled1.sav [DataSet0]'. The toolbar contains various icons for file operations and data manipulation. The main window displays a data table with 5 rows and 6 columns. The columns are labeled Name, Gender, Height, Weight, and BMI. The BMI column is highlighted with a red box, and a red arrow points from the text 'The new variable' to it. The data in the table is as follows:

	Name	Gender	Height	Weight	BMI
1	Joseph	male	180.00	75.00	23.15
2	Caitin	female	165.00	67.00	24.61
3	Charles	male	175.00	80.00	26.12
4	Catherine	male	185.00	75.00	21.91
5					

At the bottom of the window, there are tabs for 'Data View' and 'Variable View', and a status bar that reads 'IBM SPSS Statistics Processor is ready'.



## (Data editing)

## تحرير البيانات

- Research on a subset of observations

- البحث في مجموعة فرعية من الملاحظات

Selecting cases

- Sometimes a certain **subanalysis requires** that the analysis to be performed may only be done using a number of **specific observations** (cases).
- It is then possible to create separate files by **deleting the non-relevant observations** in the total data file each time, however this method is not efficient.
- There is a procedure in SPSS which may be used to **temporarily turn off the observations** which the user does not wish to include in the sub-study (thereby not deleting them permanently).



(Data editing)

تحرير البيانات

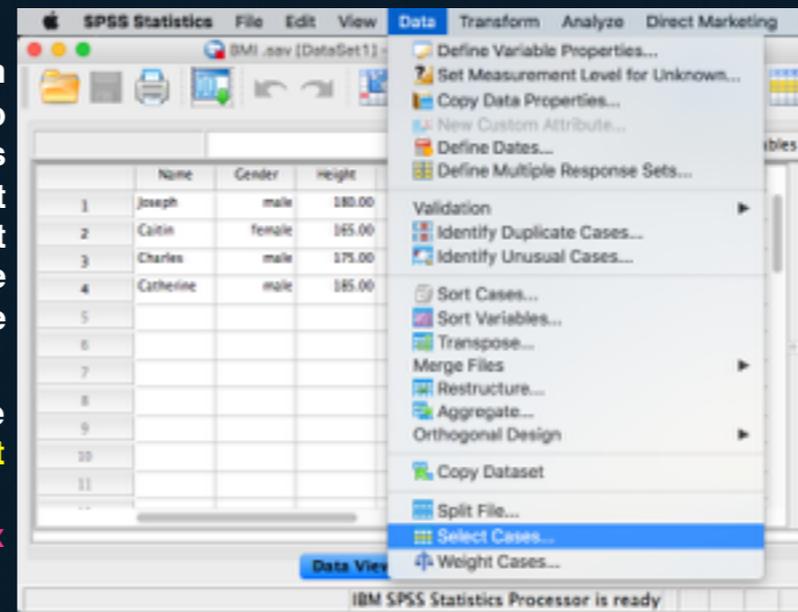
- Research on a subset of observations

• البحث في مجموعة فرعية من الملاحظات

**Selecting cases**

Suppose the researcher in the example would like to select only the male cases (e.g. for a subanalysis), but at the same time, does not wish to permanently delete the other observations (the females).

- The path that then must be followed is **Data/Select Cases**
- Then it will appear a box see in the next slides



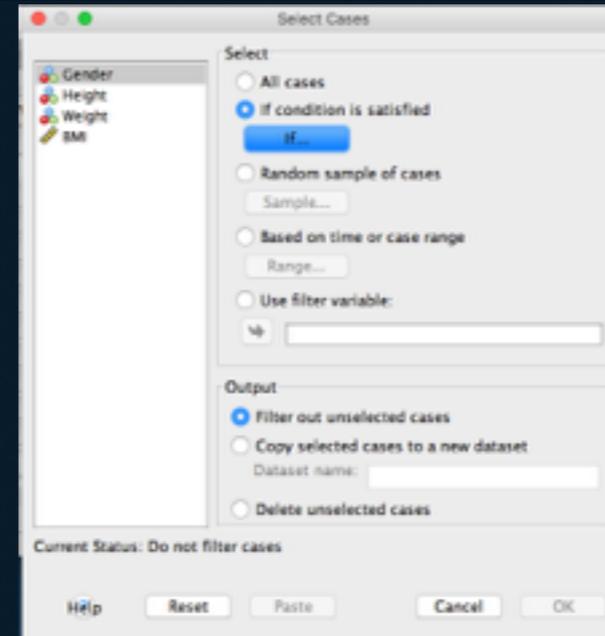
(Data editing)

تحرير البيانات

• Research on a subset of observations

• البحث في مجموعة فرعية من الملاحظات

**Selecting cases** The default setting 'All Cases' must be changed by checking the option 'If condition is satisfied' and then clicking the 'If' button then it will open a box, see in the next slide



(Data editing)

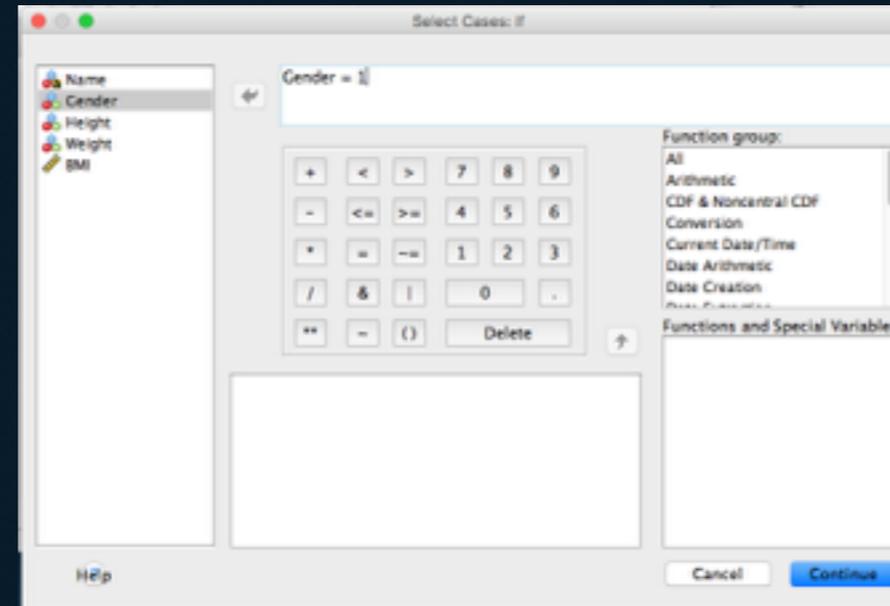
تحرير البيانات

• Research on a subset of observations

• البحث في مجموعة فرعية من الملاحظات

**Selecting cases**

Click on 'gender' and make this equal to 1 (1 is the code for the male gender). Then click on 'Continue' and then on 'OK'.



(Data editing)

تحرير البيانات

• Research on a subset of observations

• البحث في مجموعة فرعية من الملاحظات

**Selecting cases**

In the 'Data View' window, one will see a slanted line through certain respondent numbers indicating that the observations for the females have been turned off. An extra variable has also been created (**filter\_\$**).

The screenshot shows the IBM SPSS Statistics Data Editor window for a dataset named 'BMI.sav'. The window is in 'Data View' and displays a table with 6 variables: Name, Gender, Height, Weight, BMI, and filter\_\$. The 'filter\_\$(var)' column contains values 'Selected' and 'Not Selected'. Rows 2 and 4 are marked with a slanted line, indicating they are filtered out. The status bar at the bottom indicates 'Filter On'.

	Name	Gender	Height	Weight	BMI	filter_\$(var)
1	Joseph	male	180.00	75.00	23.15	Selected
2	Caitin	female	165.00	67.00	24.61	Not Selected
3	Charles	male	175.00	80.00	26.12	Selected
4	Catherine	female	185.00	75.00	21.91	Not Selected
5						
6						
7						
8						
9						
10						
11						



المركز الجامعي لميلة

1. When the researcher would like to go back and work on all of the observations, he will once again follow the path Data/Select Cases and recheck the default setting 'All Cases'.

(Data editing)

تحرير البيانات

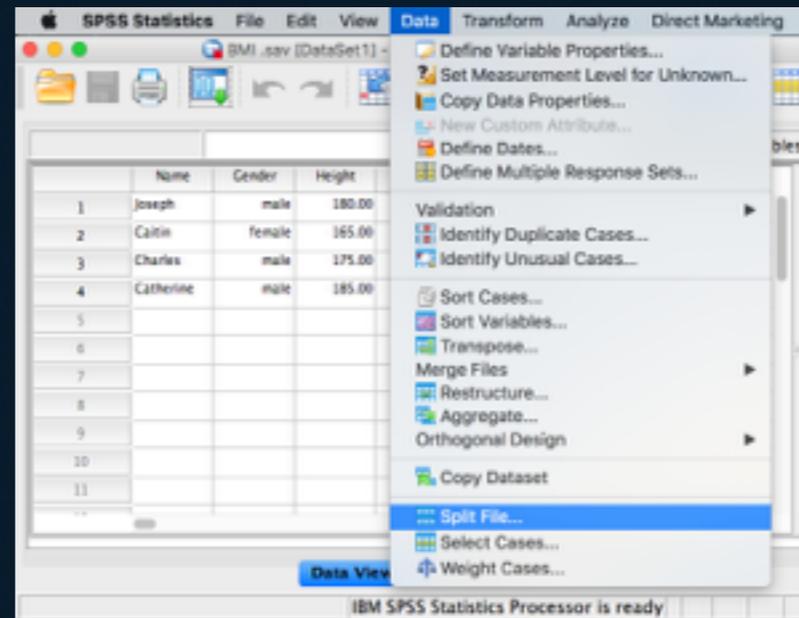
• Splitting the data file

• تقسيم قاعدة البيانات

**Split file:**

This means that when an analysis is performed, the user will obtain the results for the different groups for the variable for which the file has been split.

**EXP:** Suppose that the researcher wishes to perform separate analyses for the women as well as the men. The path is **Data/ Split file**



(Data editing)

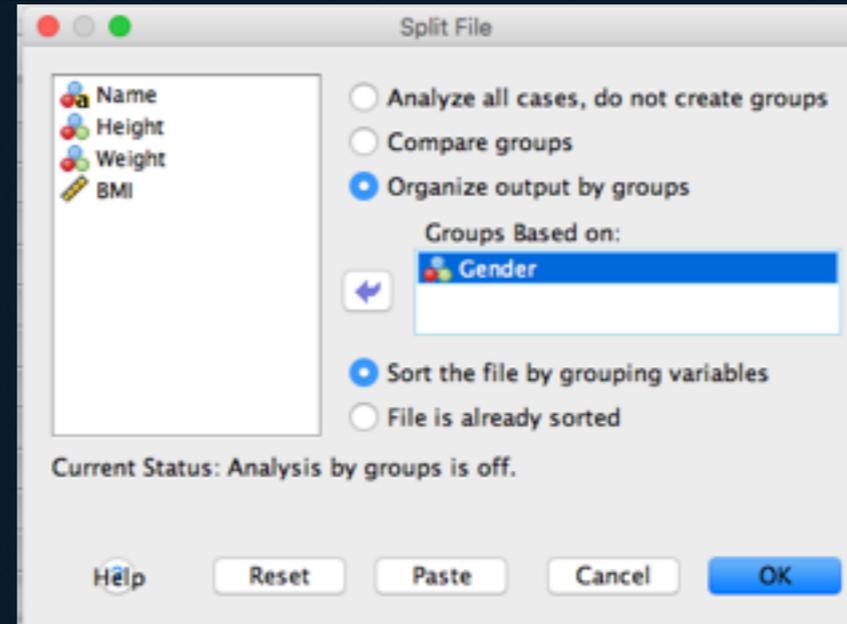
تحرير البيانات

• Splitting the data file

• تقسيم قاعدة البيانات

**Split file:**

Change the default setting 'Analyze all cases, do not create groups' in 'Organize output by groups'. Next, move 'gender' to the 'Groups Based on:' subsection. Then click on 'OK'.



(Data editing)

تحرير البيانات

• Splitting the data file

• تقسيم قاعدة البيانات

**Split file:**

You can now see that the observations have been ranked by 'gender' in the Data View tab. **the output for the indicated analysis will be grouped separately for men and women.**

	Name	Gender	Height	Weight	BMI	var	var
1	Caitin	female	165.00	67.00	24.61		
2	Catherine	female	165.00	75.00	21.91		
3	Joseph	male	180.00	75.00	23.15		
4	Charles	male	175.00	80.00	26.12		
5							
6							
7							
8							
9							
10							
11							



(Data editing)

تحرير البيانات

• Recoding variables

• إعادة ترميز المتغيرات

**Recoding variables:**

Sometimes you will want to transform a variable by grouping its categories or values together. For example, you may want to change a continuous variable into a categorical variable, or you may want to merge the categories of a nominal variable. In SPSS, this type of transform is called recoding.

In SPSS, there are three basic options for recoding variables:

- 1 **Recode into Different Variables**
- 2 Recode into Same Variables
- 3 DO IF syntax



1. In general, it is best to recode a variable into a different variable so that you never alter the original data and can easily access the original data if you need to make different changes later on.

(Data editing)

تحرير البيانات

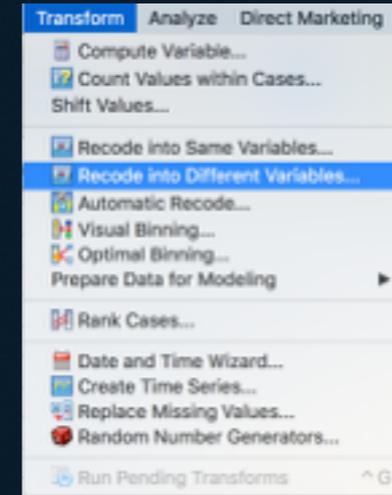
• Recoding variables

• إعادة ترميز المتغيرات

**Recoding variables:** Recoding into a different variable transforms an original variable into a new variable. That is, the changes do not overwrite the original variable; they are instead applied to a copy of the original variable under a new name.

To recode into different variables,  
click **Transform > Recode into Different Variables**.

The **Recode into Different Variables** window will appear. See the example in the next slide.



(Data editing)

تحرير البيانات

• Recoding variables

• إعادة ترميز المتغيرات

**Recode into Different Variables:** Let's say that these five people must complete a questionnaire. we assume that this questionnaire consists of three questions (statements) in which their preferences regarding candy are being studied. The three statements must be evaluated on a 7-point scale, ranging from 'totally disagree (1)' to 'totally agree (7)'.

**Question 1:** When I watch television in the evening, I eat candy on a regular basis.

**Question 2:** If I'm hungry between meals, I will eat fruit more often than candy.

**Question 3:** I always like to add extra sugar to my dessert.

**Their answers are shown in this table:**

Name	Question 1	Question 2	Question 3
Joseph	7	3	6
Caitlin	2	5	3
Charles	5	1	5
Catherine	3	6	2
Peter	6	2	6



## (Data editing)

## تحرير البيانات

## • Recoding variables

## • إعادة ترميز المتغيرات

If the researcher wishes to perform an **analysis of this data** (e.g. calculate an **'average for candy preference'**), he must first determine whether the questions were all **scaled 'in the same direction'**.

	Name	Gender	Height	Weight	BMI	Question1	Question2	Question3
1	Joseph	1.00	180.00	75.00	23.15	7.00	3.00	6.00
2	Caitin	.00	165.00	67.00	24.61	2.00	5.00	3.00
3	Charles	1.00	175.00	80.00	26.12	5.00	1.00	5.00
4	Catherine	.00	185.00	70.00	24.22	3.00	6.00	2.00
5	peter	1.00	185.00	75.00	21.91	6.00	2.00	6.00

- Take question 2 for example.
- **Question 2: If I'm hungry between meals, I will eat fruit more often than candy.**
- **question 2 is not scaled in the same direction as questions 1 and 3 and for this reason needs to be recoded.**



1. A high score indicates that these people are not so quick to reach for candy, while a high score for questions 1 and 3 indicates that there is a great preference for candy.

(Data editing)

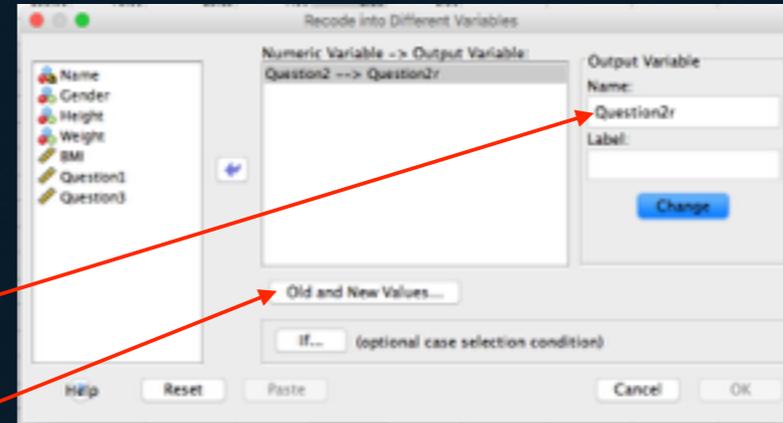
تحرير البيانات

• Recoding variables

• إعادة ترميز المتغيرات

Go to **Transform/Recode into Different Variables** which will bring up this subscreen.

1. Click on 'question2' in the list of variables on the left and click 
2. Under 'Output Variable' enter the name of the recoded variable (question2r) and click 'Change'
3. Click on the 'Old and New Values' button
4. you see a dialogue window
5. see in the next slide



## (Data editing)

## تحرير البيانات

## • Recoding variables

## • إعادة ترميز المتغيرات

For each value to be recoded, the researcher must input the **old and the new value**.

1. For 'Old Value', fill in the value to be changed and under 'New Value', type the new value (1). Next, click on the 'Add' button
2. Click **Continue**
3. then Click **Ok**

Recode into Different Variables: Old and New Values

Old Value

Value: 7

System-missing

System- or user-missing

Range: through

Range, LOWEST through value:

Range, value through HIGHEST:

All other values

New Value

Value: 1

System-missing

Copy old value(s)

Old --> New:

1 --> 7

2 --> 6

3 --> 5

4 --> 4

5 --> 3

6 --> 2

Output variables are strings Width: 8

Convert numeric strings to numbers ('5'-->5)

4. An extra variable with the recoded values has been created in the 'Data View' tab. See in the next slide



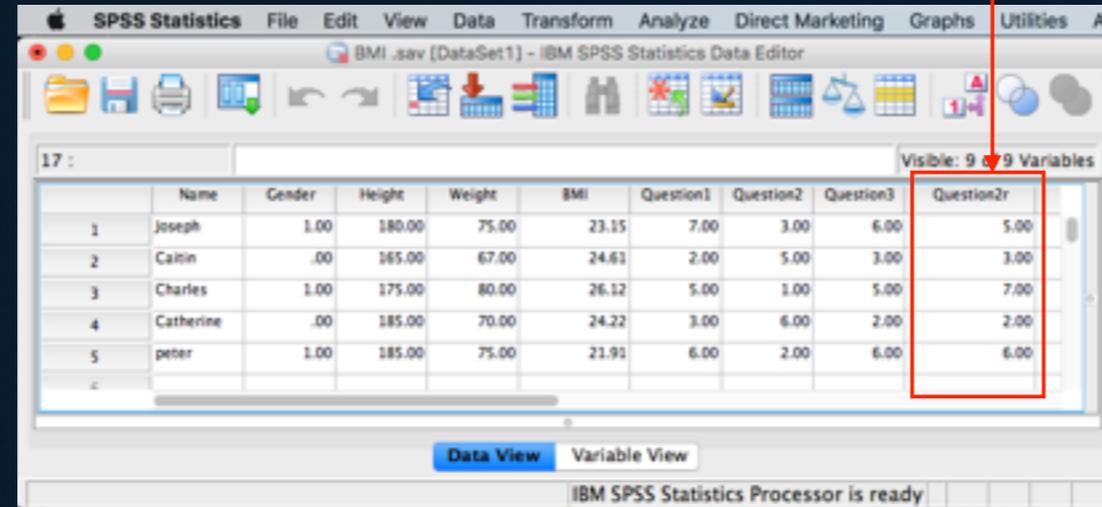
(Data editing)

تحرير البيانات

• Recoding variables

• إعادة ترميز المتغيرات

Now, a useful average of the variables 'question1', 'question2r' and 'question3' may be calculated if desired.



SPSS Statistics File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Ad

BMI .sav [DataSet1] - IBM SPSS Statistics Data Editor

17 : Visible: 9 of 9 Variables

	Name	Gender	Height	Weight	BMI	Question1	Question2	Question3	Question2r
1	Joseph	1.00	180.00	75.00	23.15	7.00	3.00	6.00	5.00
2	Caitin	.00	165.00	67.00	24.61	2.00	5.00	3.00	3.00
3	Charles	1.00	175.00	80.00	26.12	5.00	1.00	5.00	7.00
4	Catherine	.00	185.00	70.00	24.22	3.00	6.00	2.00	2.00
5	peter	1.00	185.00	75.00	21.91	6.00	2.00	6.00	6.00

Data View Variable View

IBM SPSS Statistics Processor is ready



