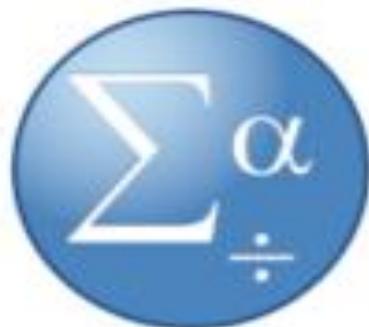


An Introduction to SPSS



Presented by:

Mohammad Moqaddasi Amiri

Assistant Professor of Biostatistics

Sirjan Faculty of Medical Sciences

May 2021



Objectives

- Getting to know about SPSS software
- Data Preparation for analysis
- Preliminary analysis

رئوس مطالب

- آشنایی با صفحه SPSS و کاربرگ های آن
- ورود اطلاعات به SPSS
- آشنایی با برخی دستورات در منوی Data
- کاربرد دستورات Compute و Recode
- انجام تحلیل توصیفی اطلاعات

Data View

Untitled1 [DataSet0] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

	var											
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												

Data View Variable View

Variable View

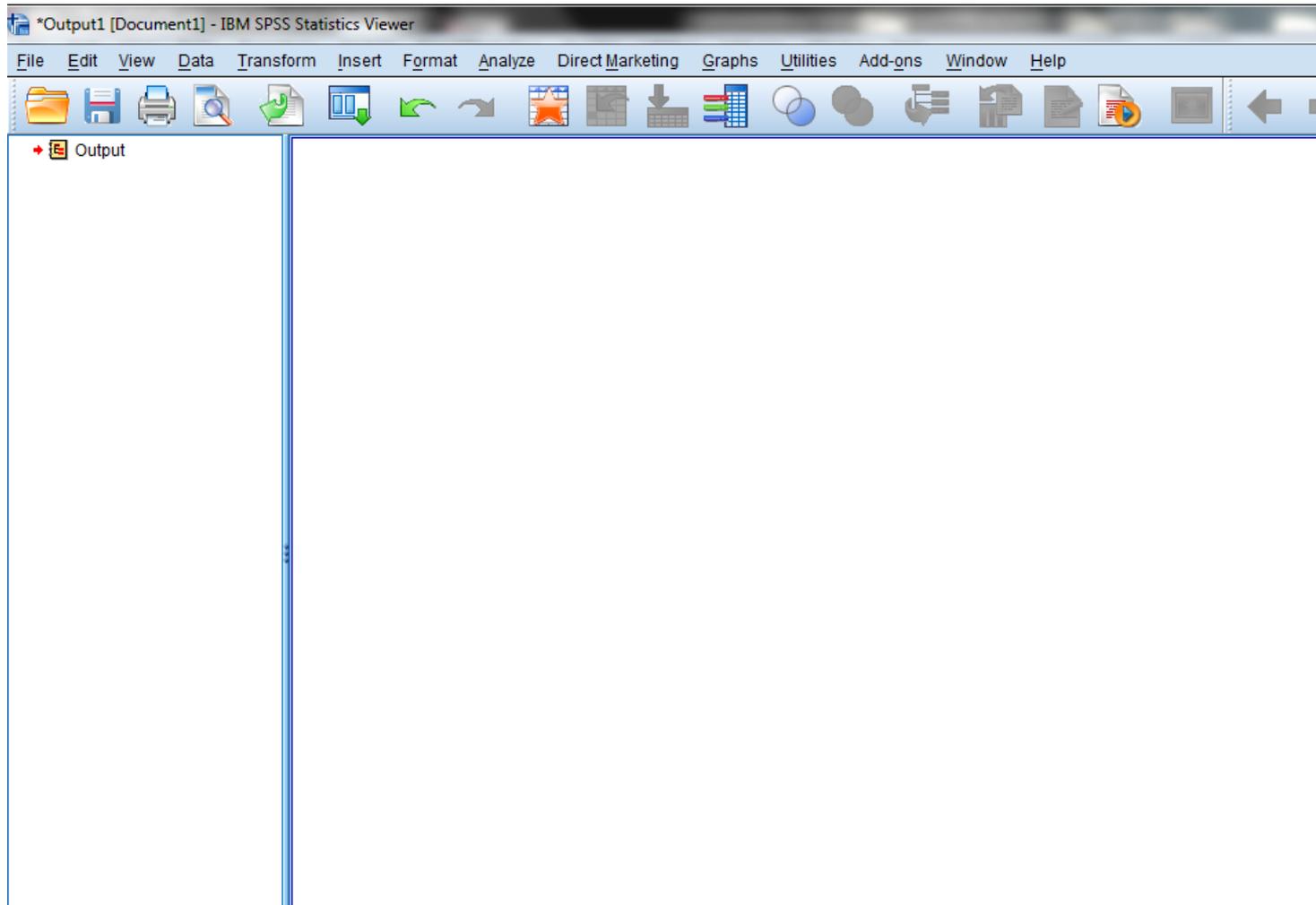
Untitled1 [DataSet0] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

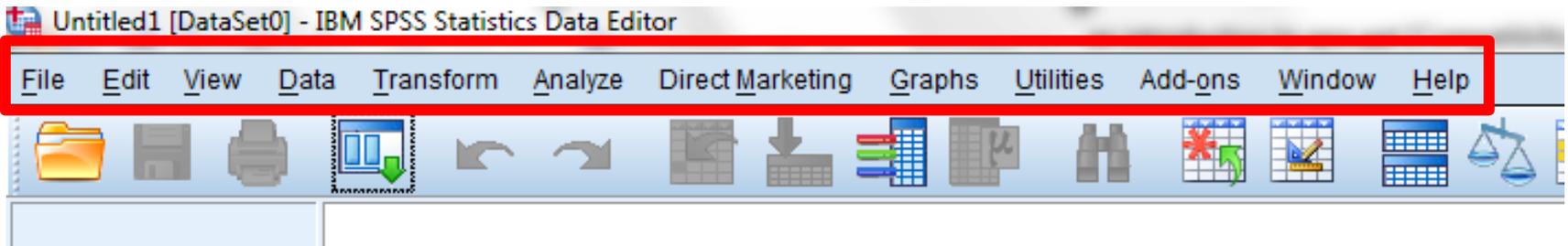
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

Data View Variable View

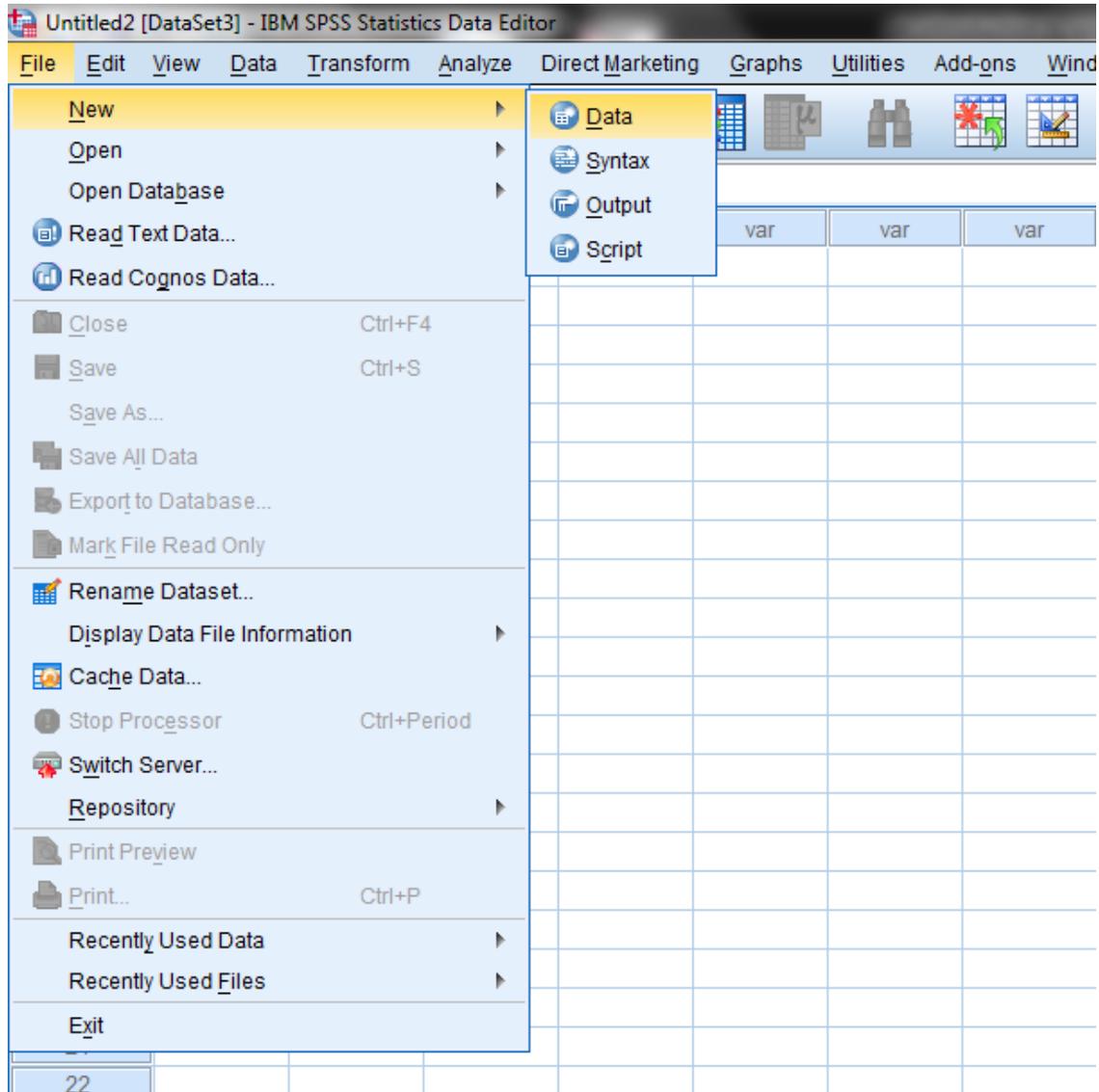
Output file



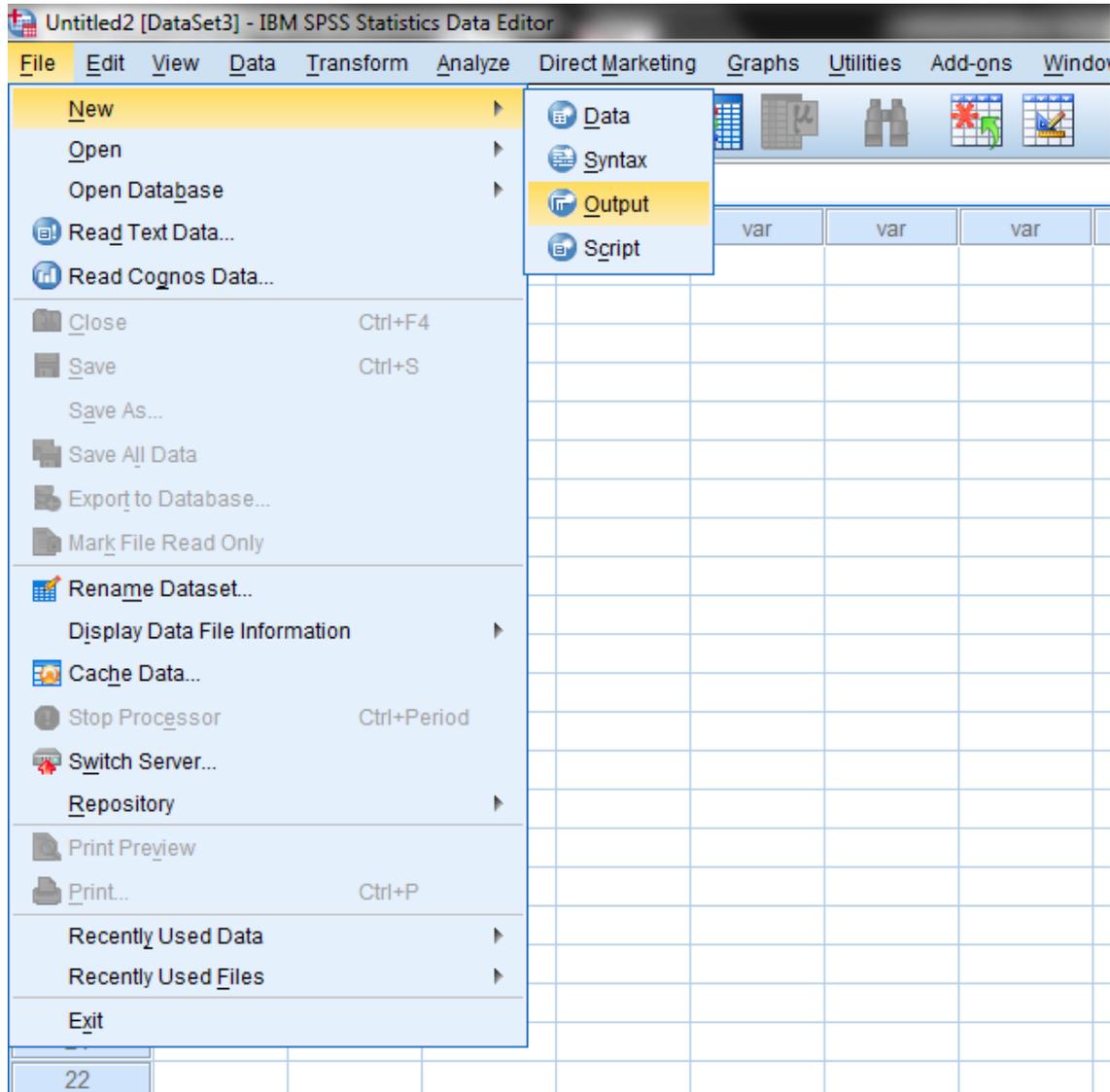
Menu Bar



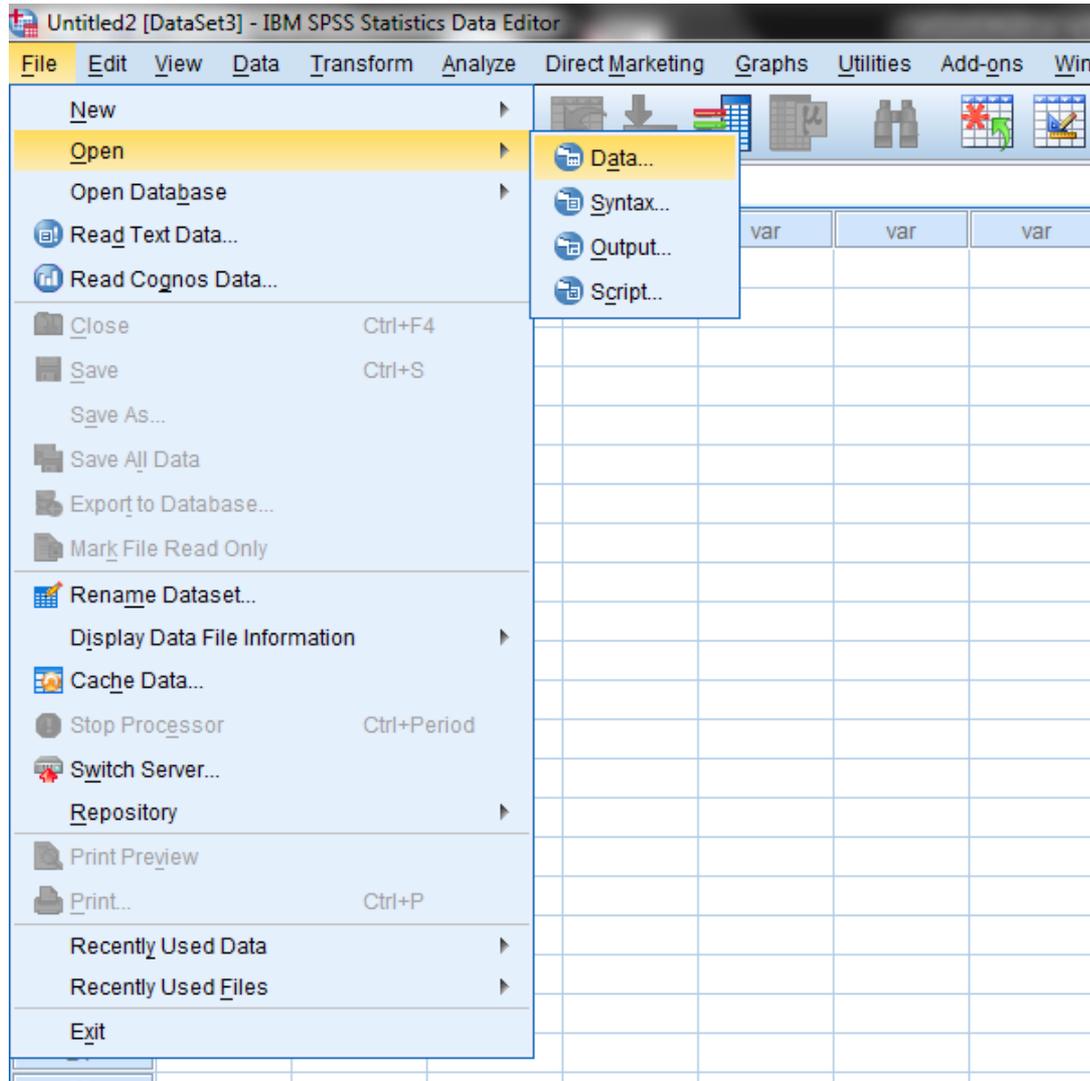
New Data



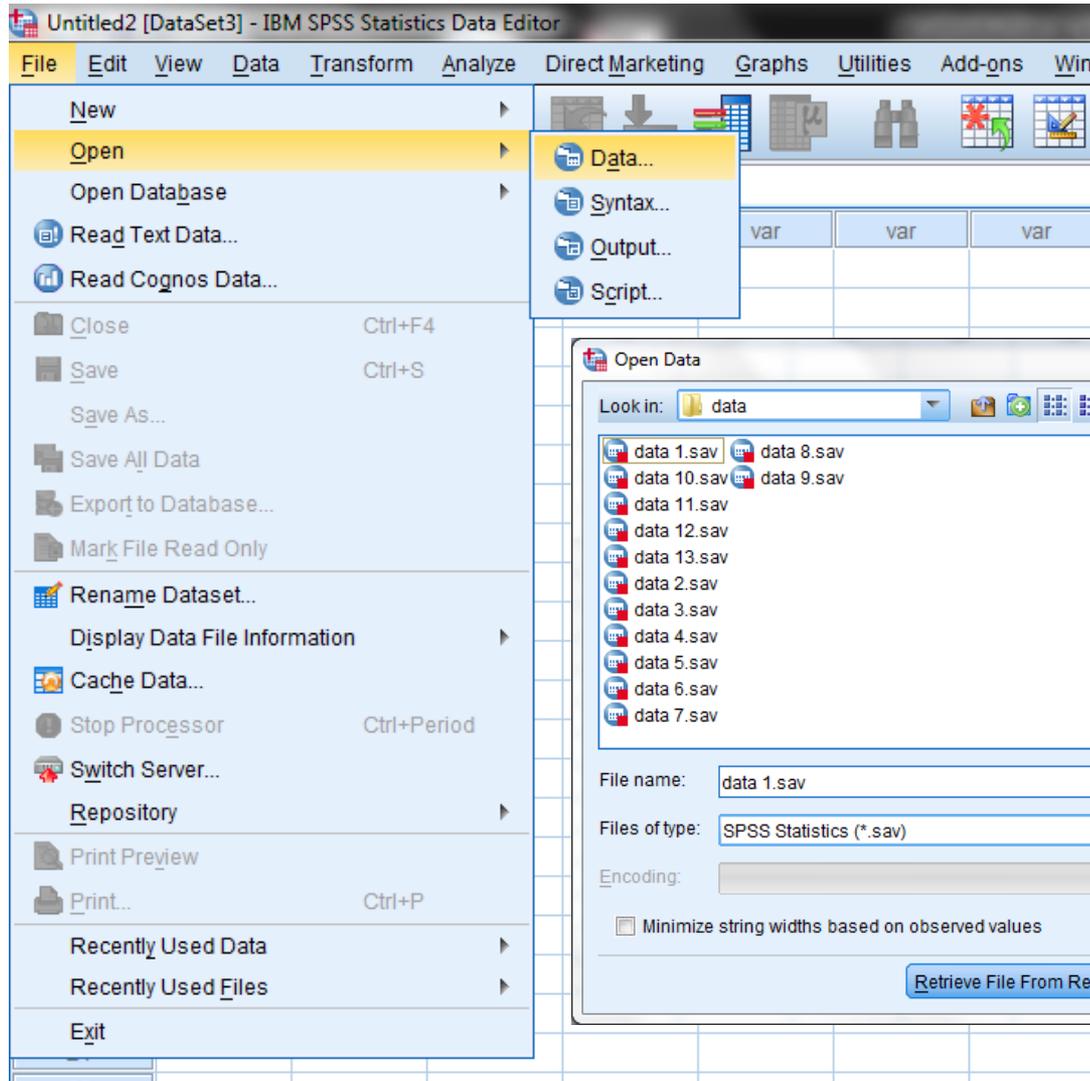
New Output



Open Data

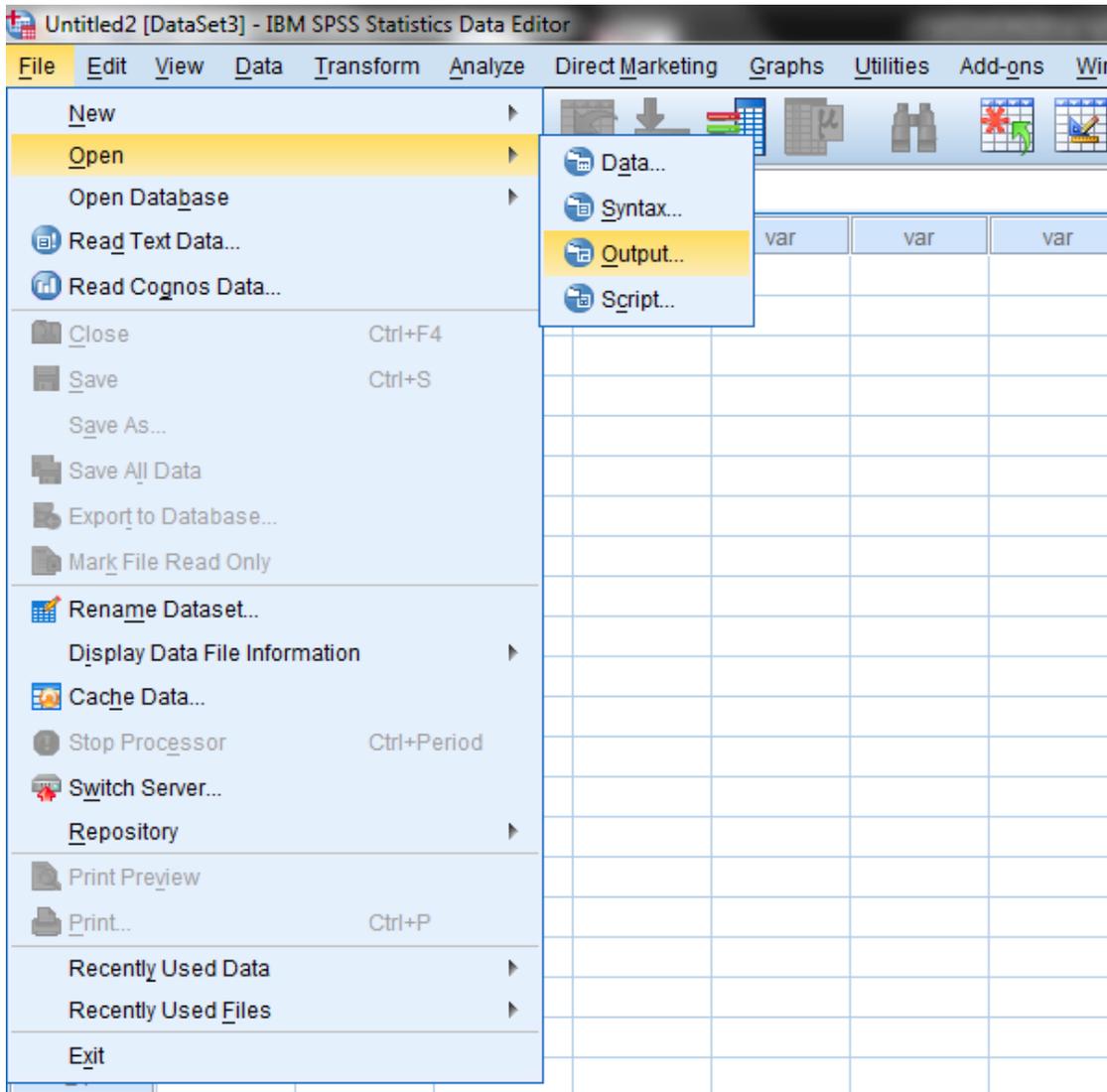


Open Data



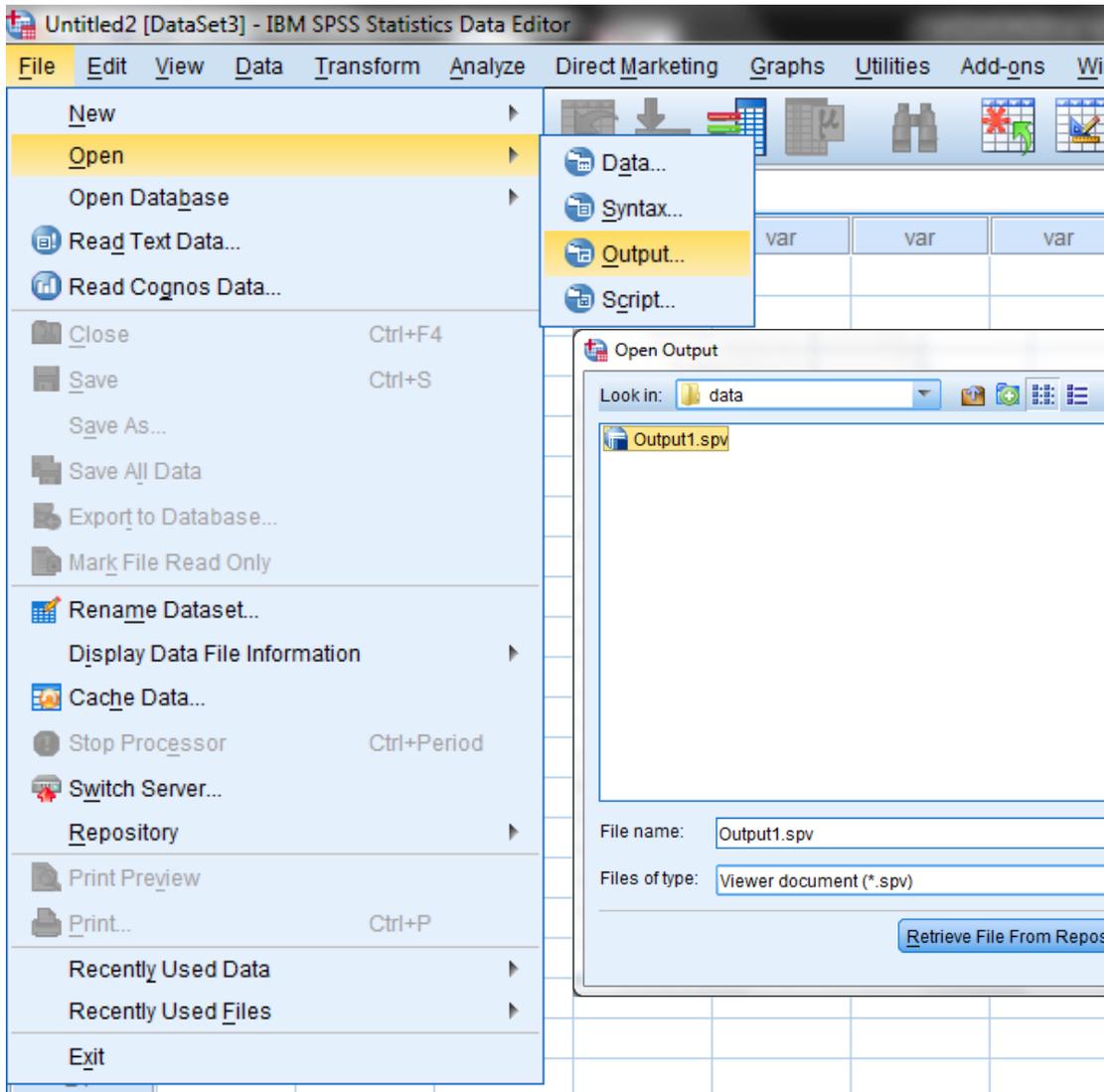
پسوند sav •

Open Output



Open Output

پسوند spv •



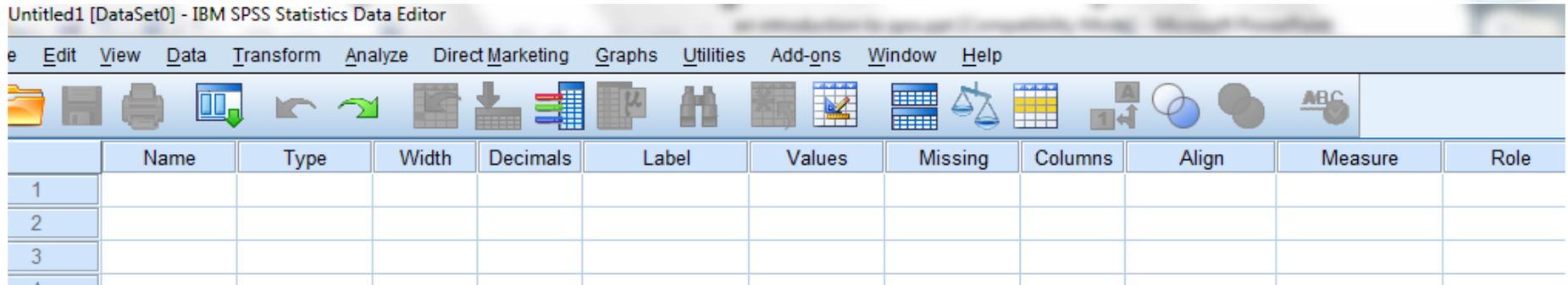
ورود اطلاعات به SPSS

- تعریف متغیرها
Variable view –
- واردن کردن داده های ثبت شده
Data view –

تعريف متغير

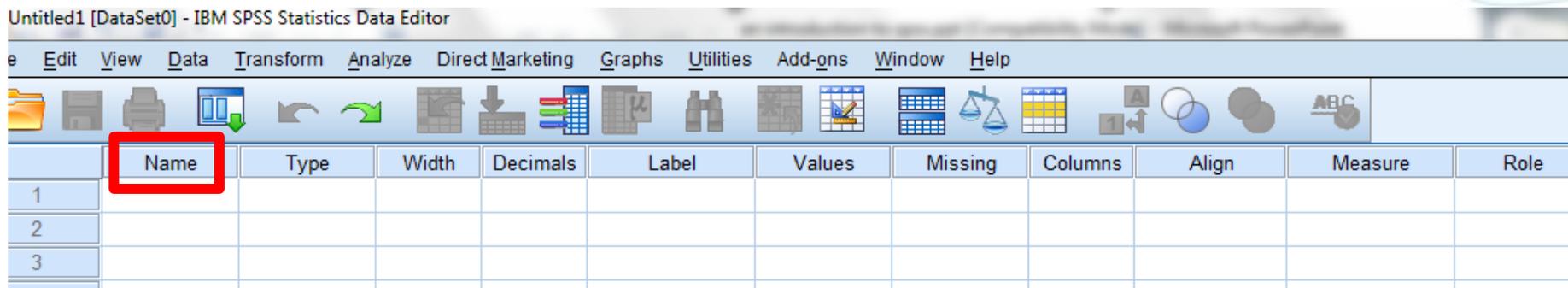
Untitled1 [DataSet0] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help



	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1											
2											
3											
4											

تعریف متغیر



• Name: نام متغیر

– کاراکتر اول باید حرف باشد

– از جای خالی و کاراکترهای خاص (*,!,?) بین کاراکترها نمی توان استفاده کرد.

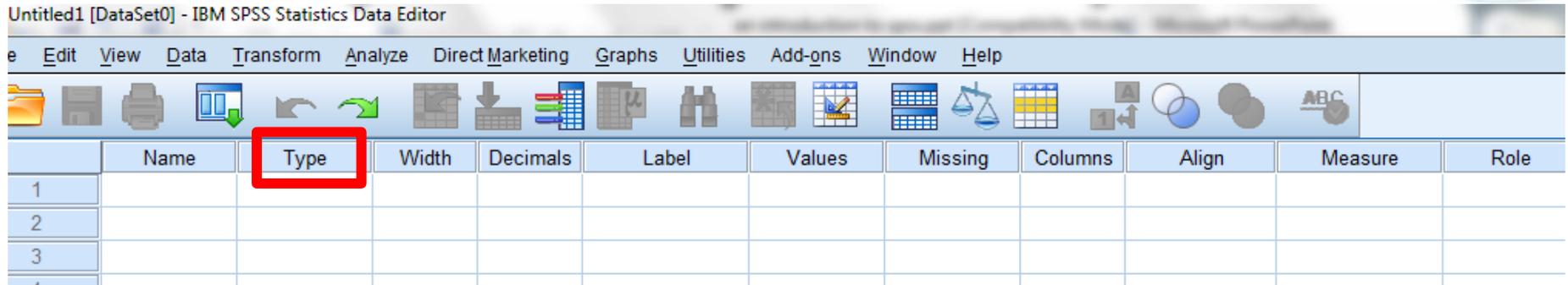
– نقطه و خط تیره در انتهای نام قرار نمی گیرد

– منحصر به فرد

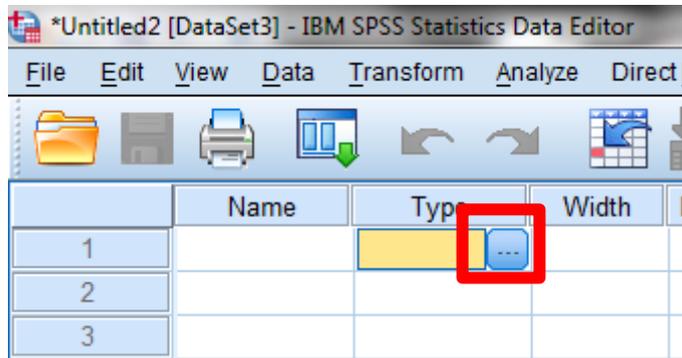
– از کلید واژه های ALL, AND, OR, BY, NOT, To, with و ... نمی

توان استفاده کرد

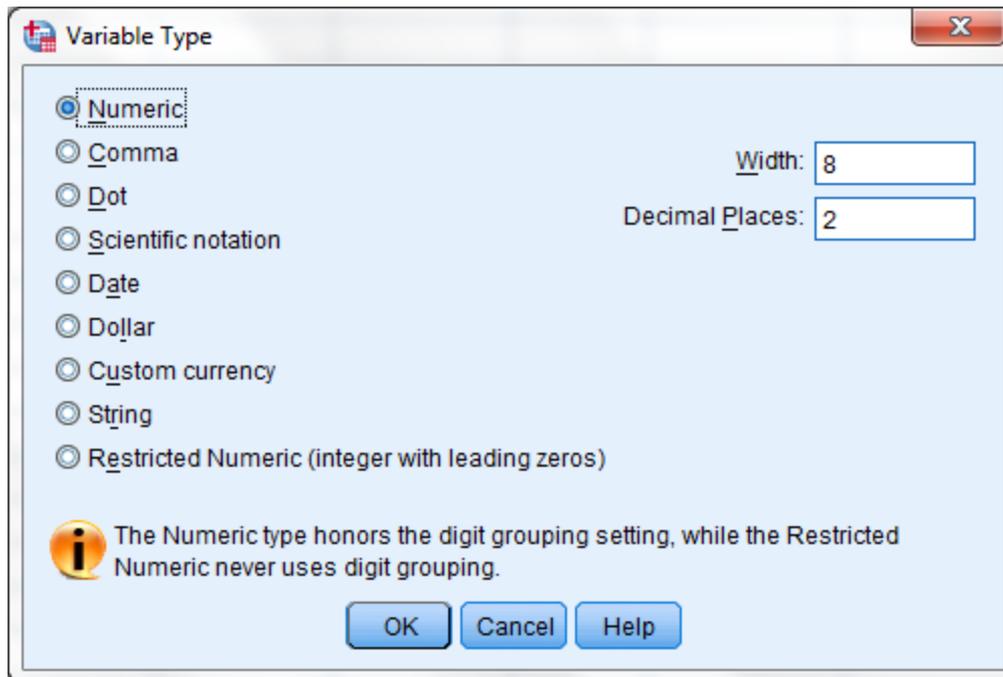
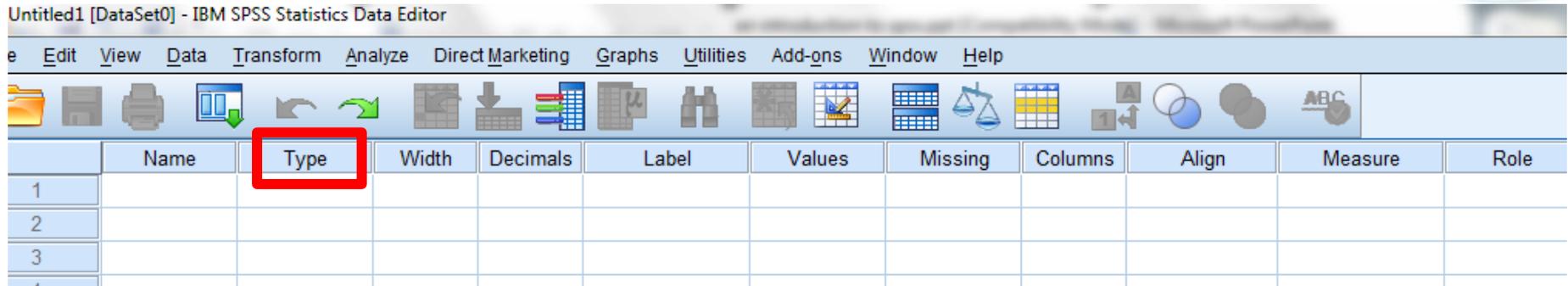
تعريف متغير



• Type: نوع متغير



تعريف متغير

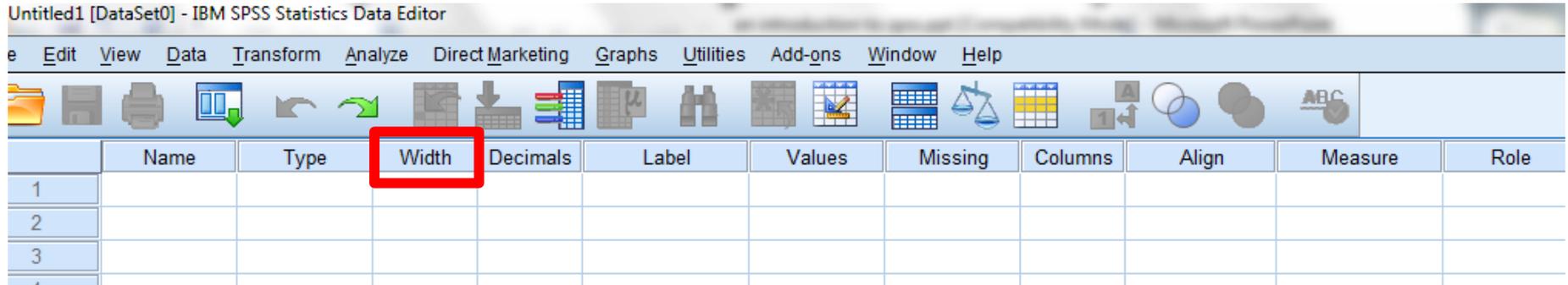


• Type: نوع متغير

تعريف متغير

Untitled1 [DataSet0] - IBM SPSS Statistics Data Editor

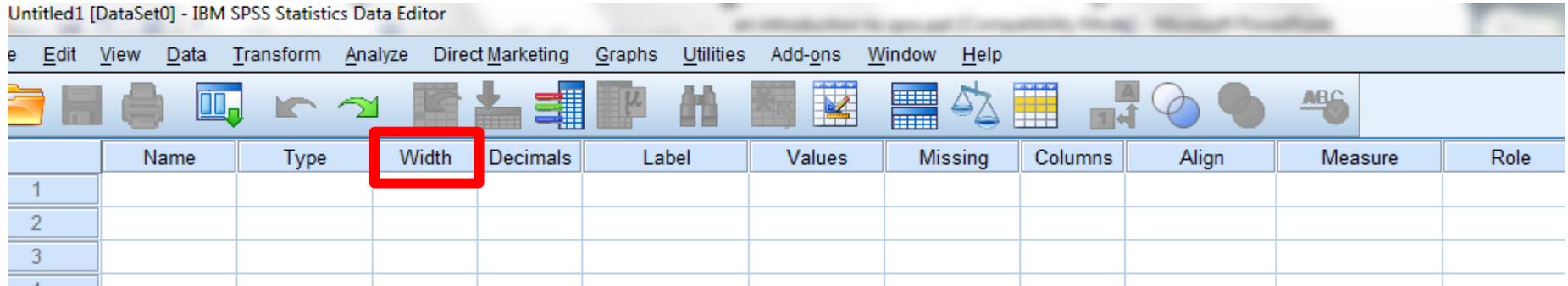
File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help



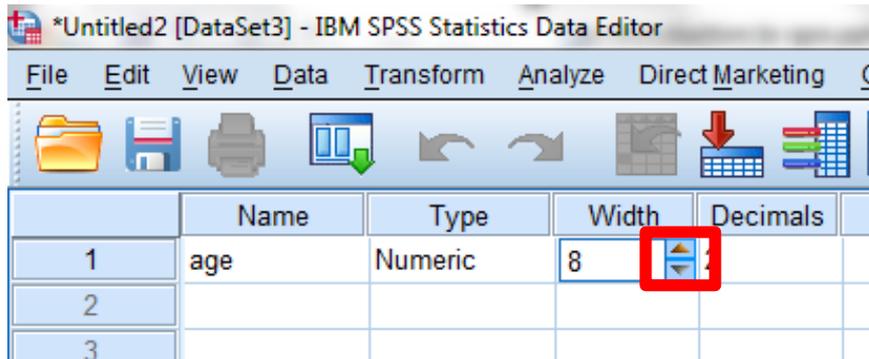
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1											
2											
3											
4											

• Width: پهناى متغير

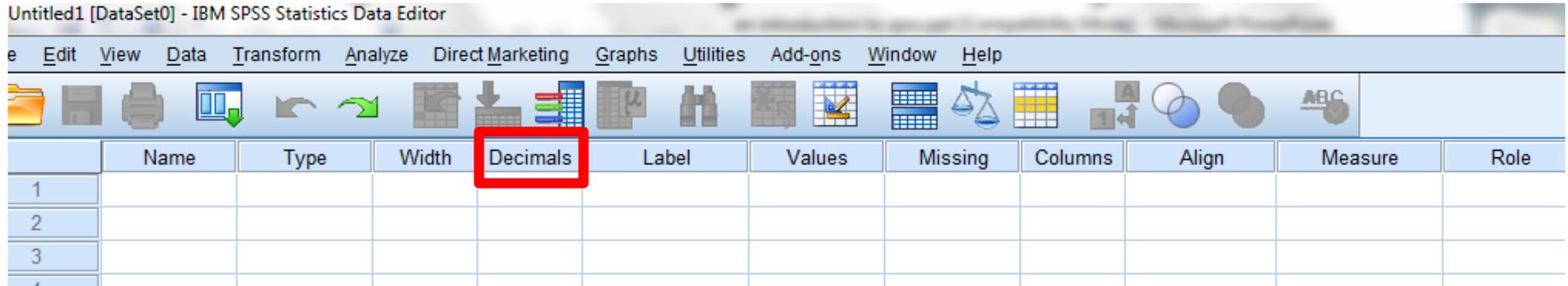
تعريف متغير



• Width: پهناى متغير

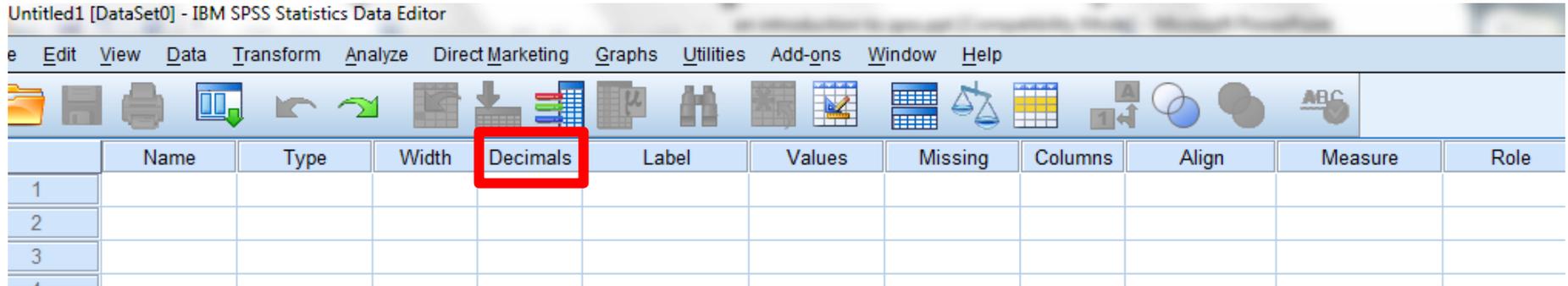


تعريف متغير

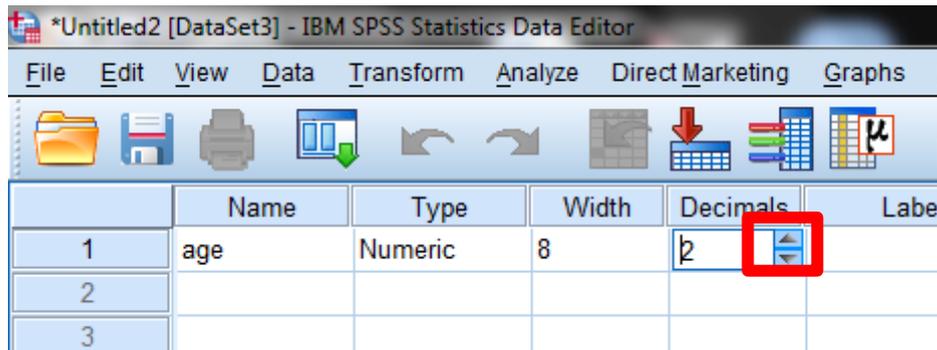


• Decimals: اعشار

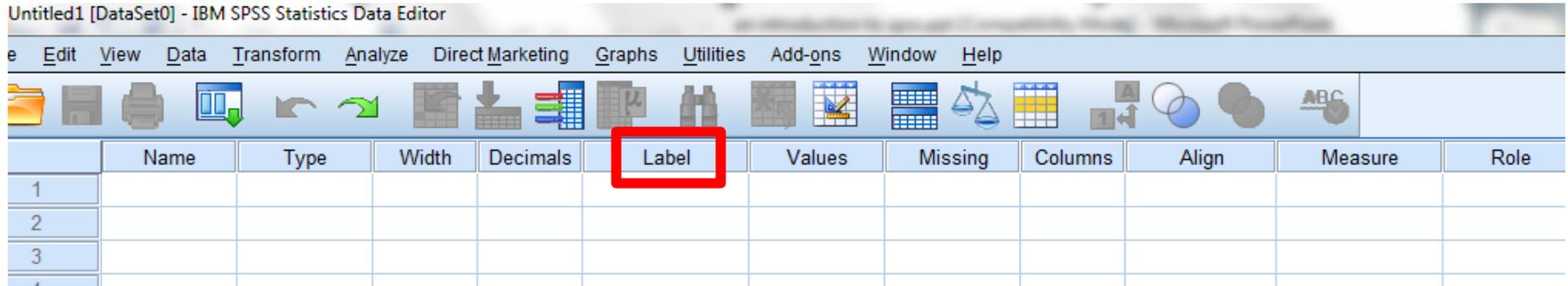
تعريف متغير



• Decimals: اعشار



تعريف متغير

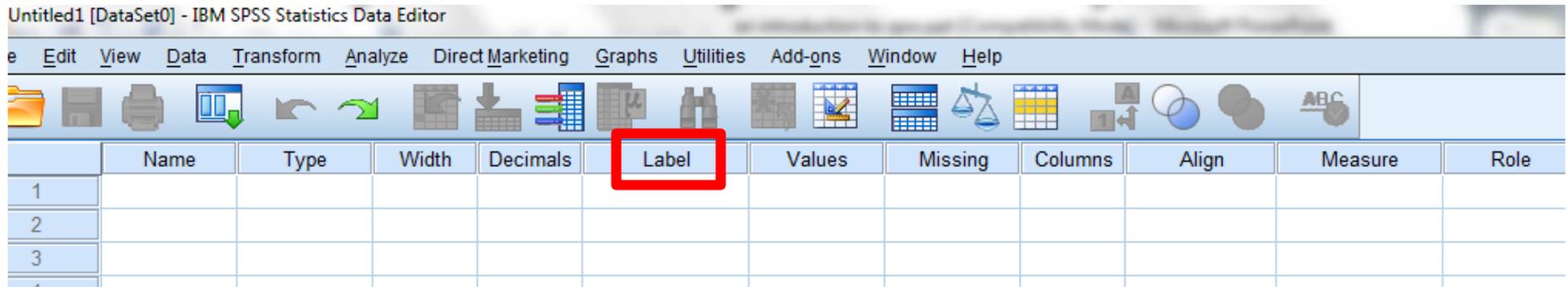


Label •

تعريف متغير

Untitled1 [DataSet0] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

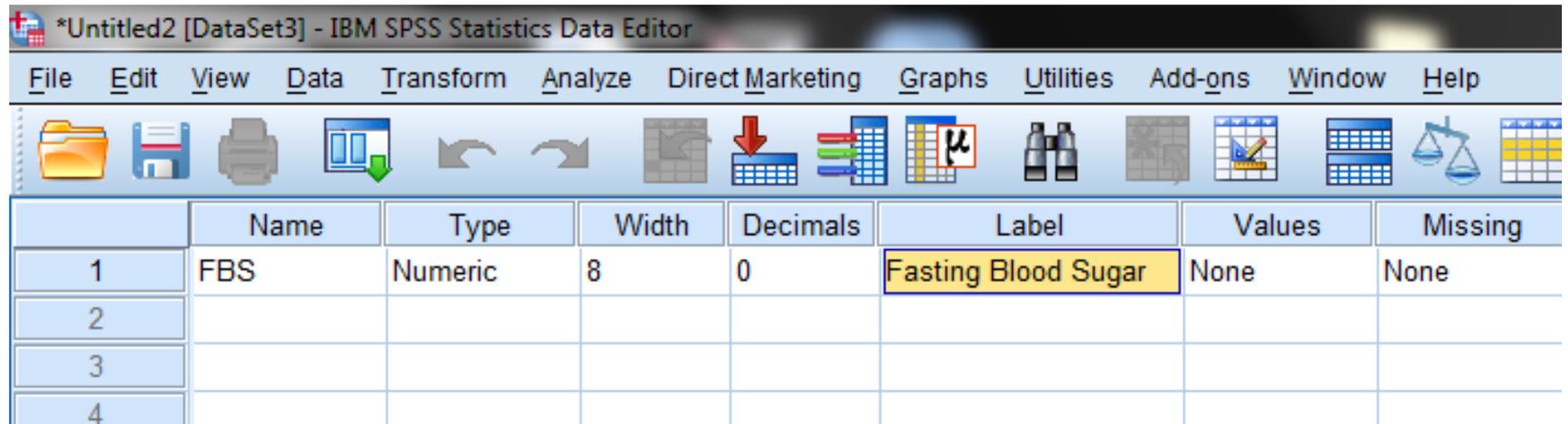


	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1											
2											
3											

Label •

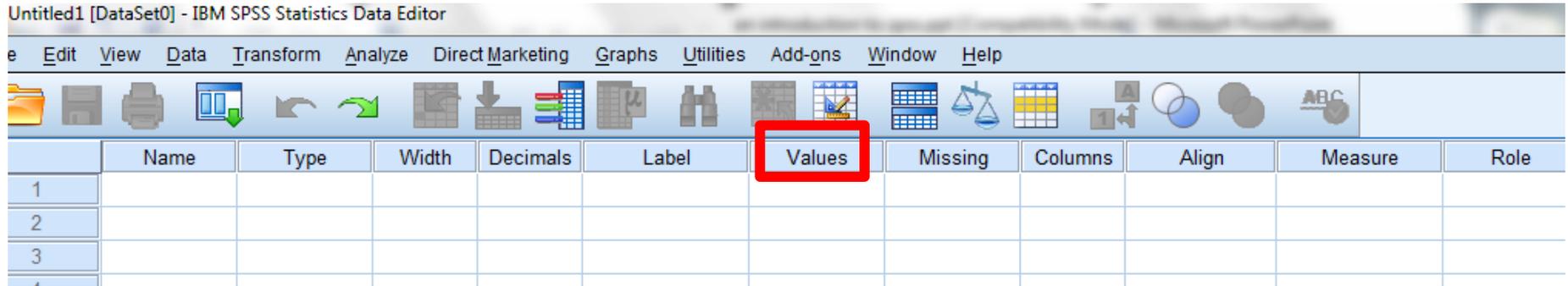
*Untitled2 [DataSet3] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help



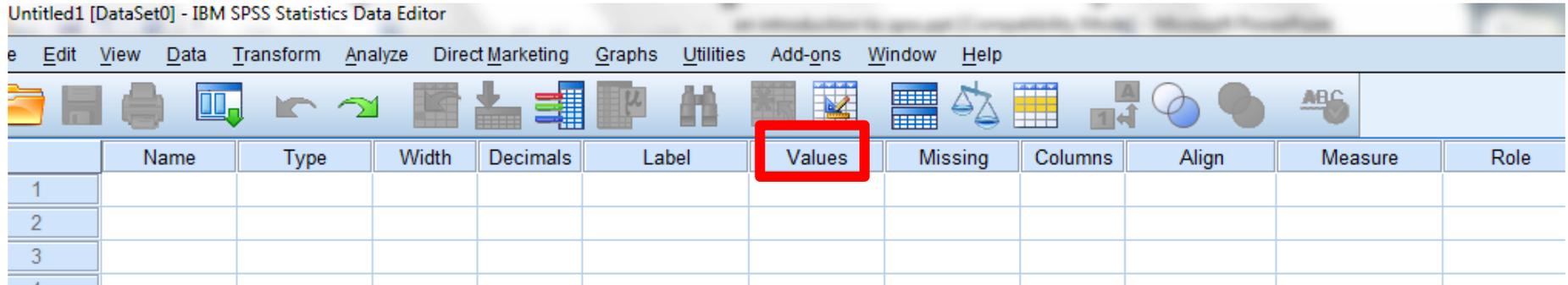
	Name	Type	Width	Decimals	Label	Values	Missing
1	FBS	Numeric	8	0	Fasting Blood Sugar	None	None
2							
3							
4							

تعريف متغير

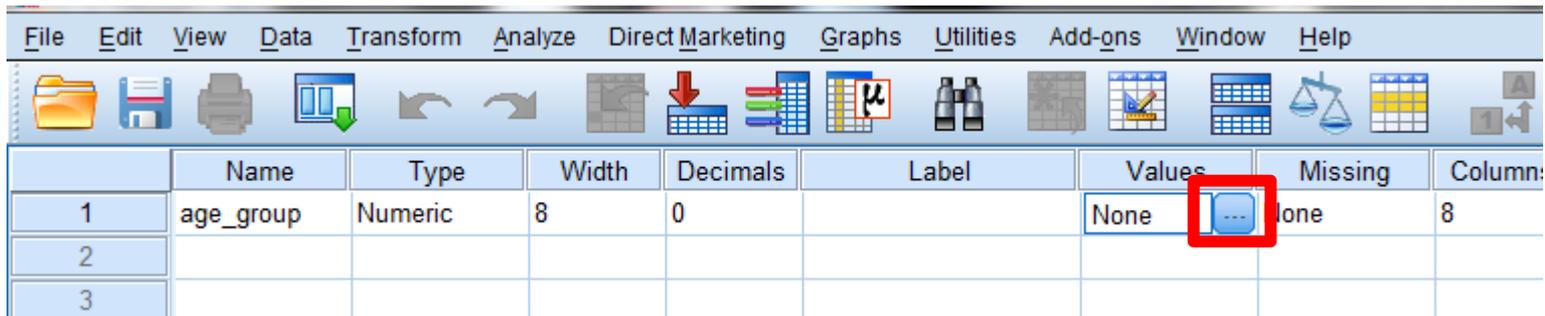


Values •

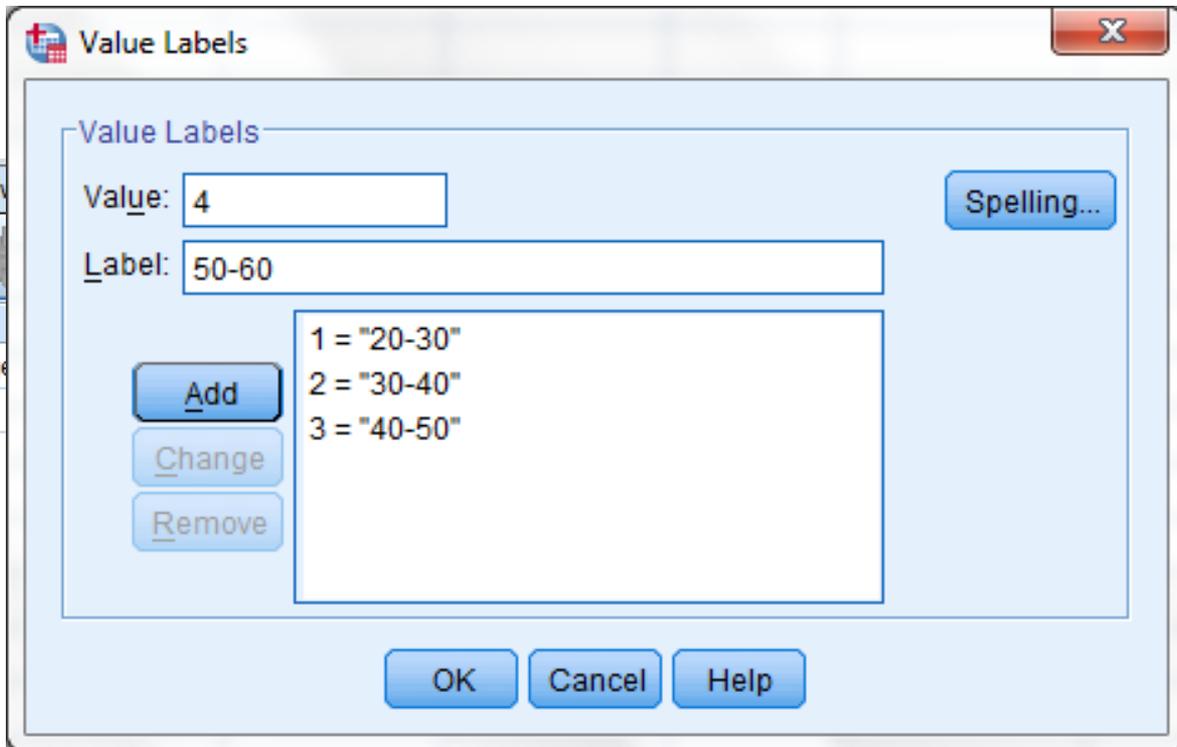
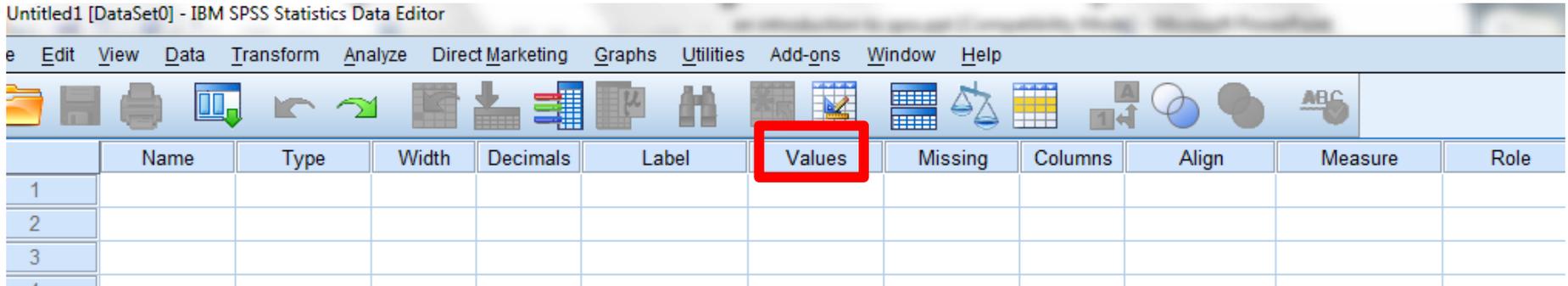
تعريف متغير



Values •

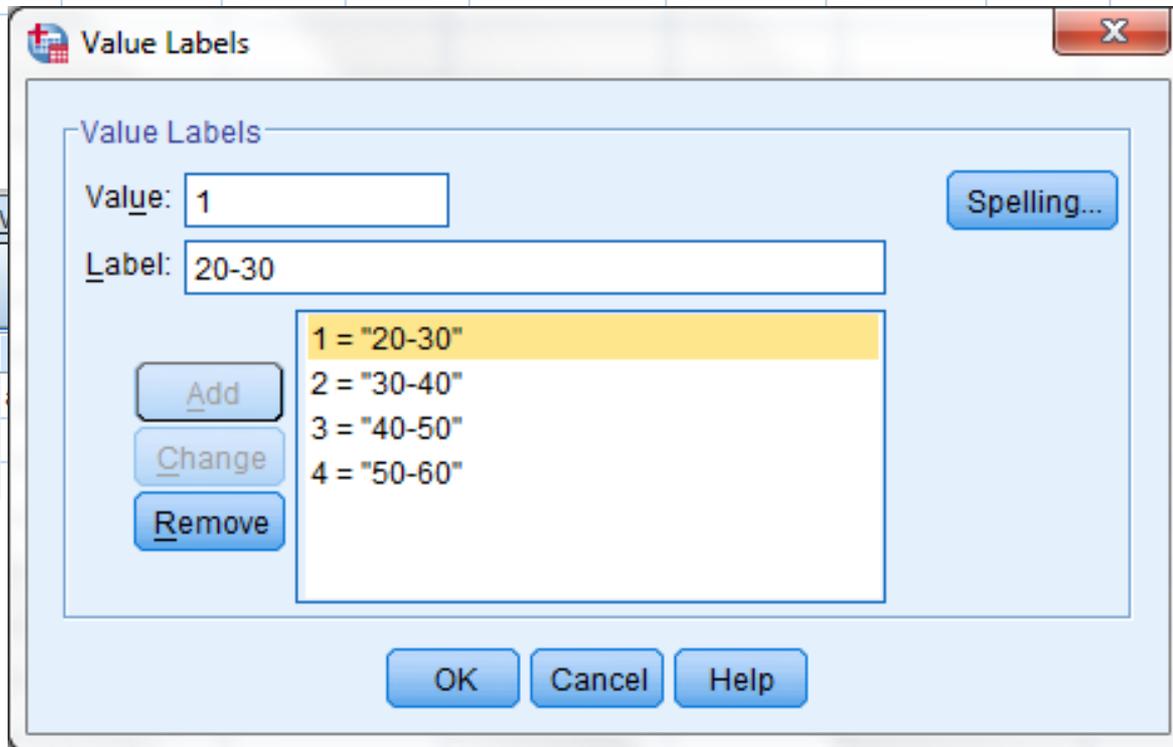
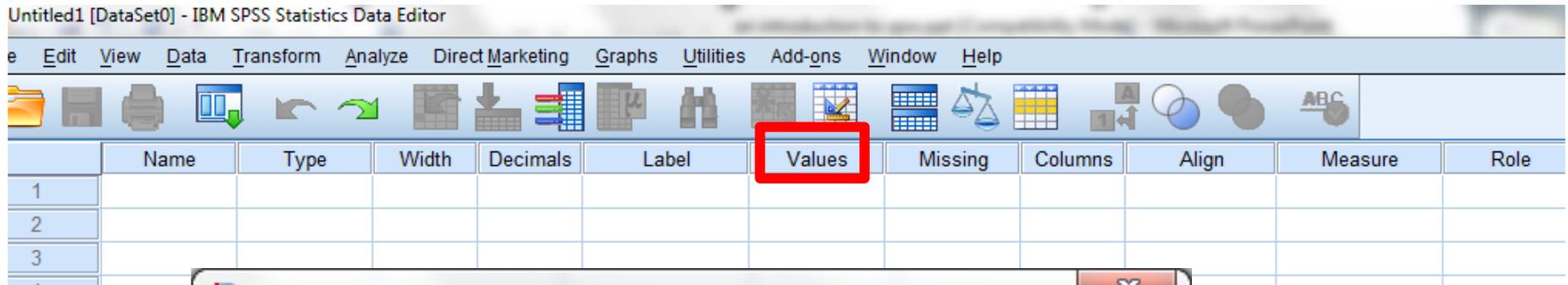


تعريف متغير



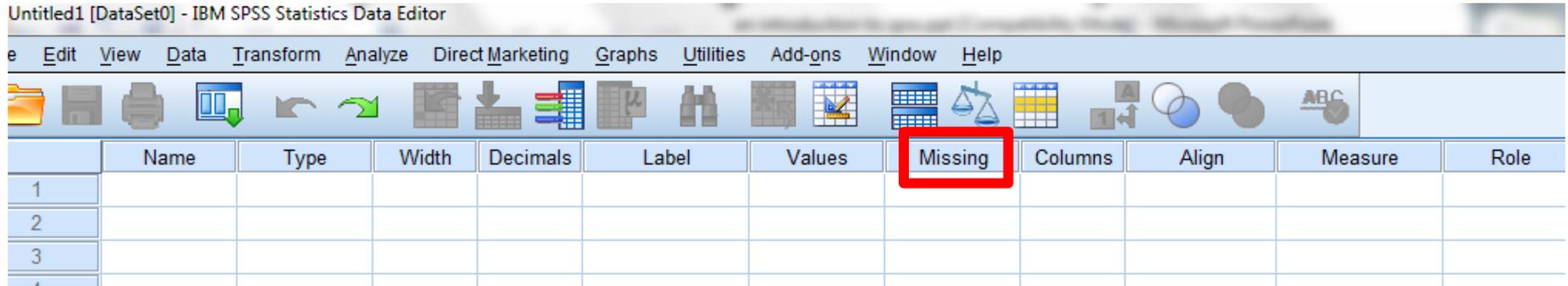
Values •

تعريف متغير



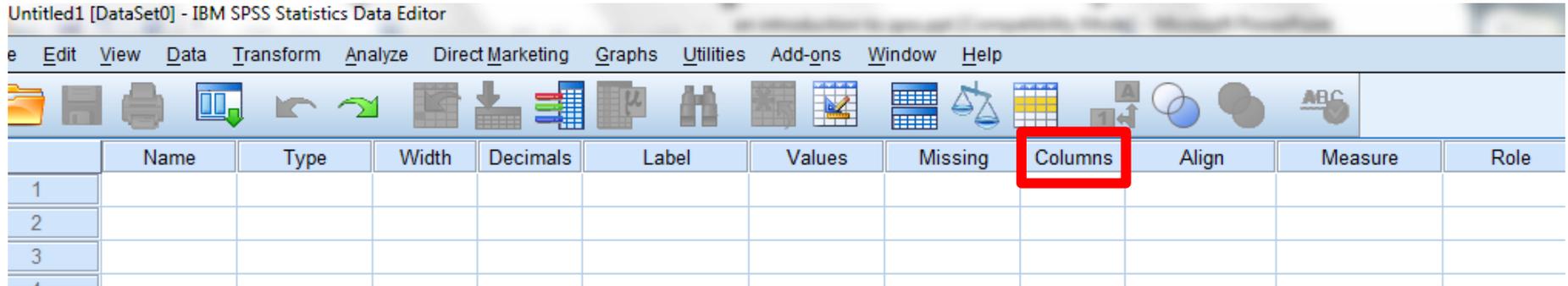
Values •

تعريف متغير



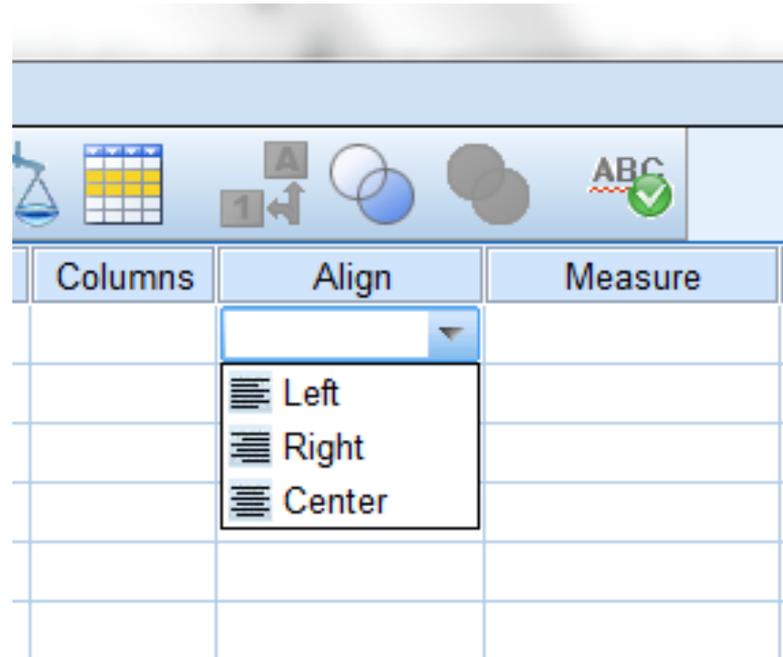
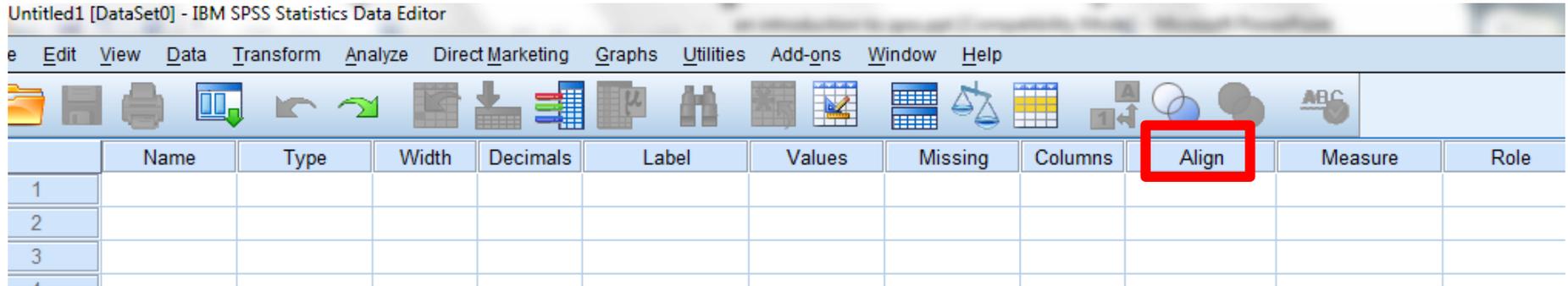
Missing •

تعريف متغير



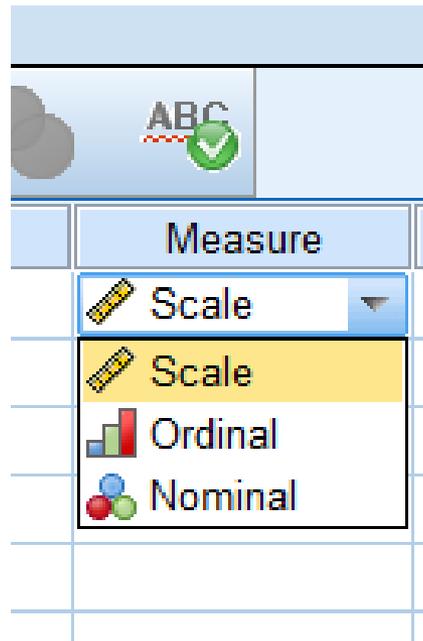
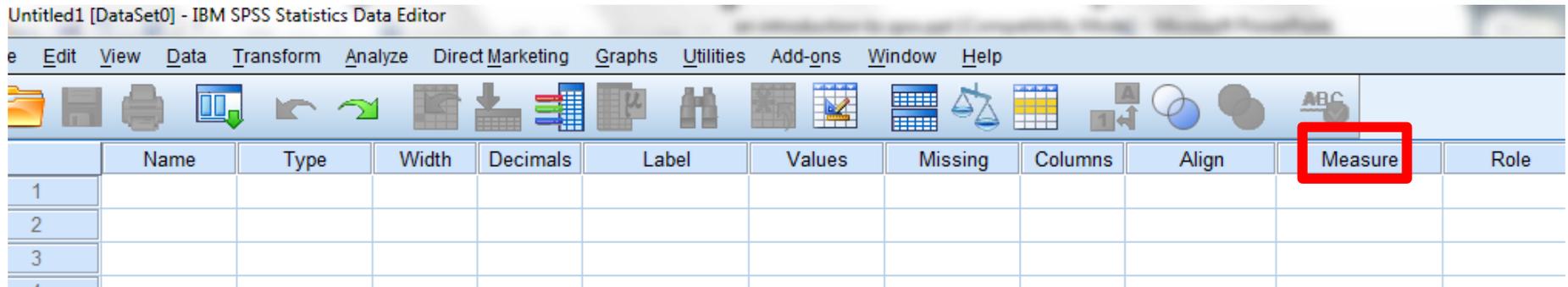
Columns •

تعريف متغير



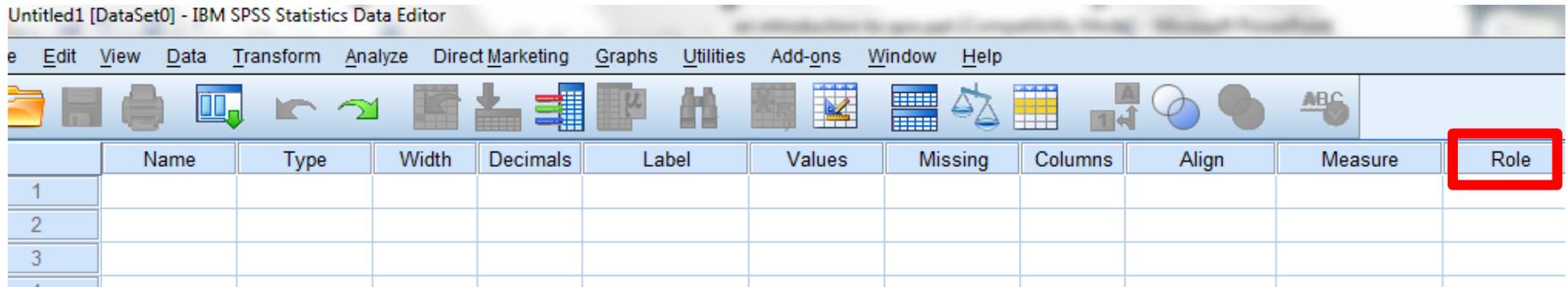
Align •

تعريف متغير

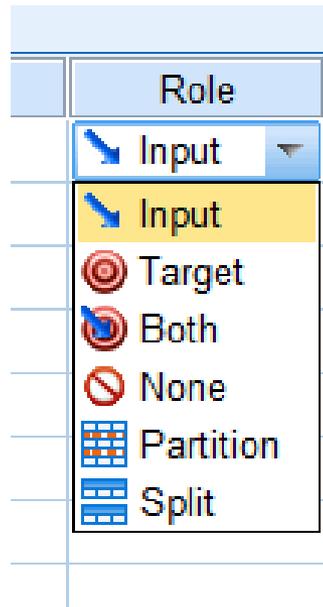


Measure •

تعريف متغير



Role •



تعريف متغير

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	ID	Numeric	8	0		None	None	8	Right	Scale
2	age_group	Numeric	8	0		{1, 20-30}...	None	8	Right	Ordinal
3	Gender	Numeric	8	0		{1, Male}...	None	8	Right	Nominal
4	FBS	Numeric	8	0	Fasting Blood Sugar	None	None	8	Right	Scale
5										
6										

تعريف متغير

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	ID	Numeric	8	0		None	None	8	Right	Scale
2	age_group	Numeric	8	0		{1, 20-30}...	None	8	Right	Ordinal
3	Gender	Numeric	8	0		{1, Male}...	None	8	Right	Nominal
4	FBS	Numeric	8	0	Fasting Blood Sugar	None	None	8	Right	Scale
5										
6										

Value Labels

Value:

Label:

Add
Change
Remove

1.00 = "20-30"
2.00 = "30-40"
3.00 = "40-50"
4.00 = "50-60"

Spelling...

OK Cancel Help

Value Labels

Value:

Label:

Add
Change
Remove

1 = "Male"
2 = "Female"

Spelling...

OK Cancel Help

File Edit View Data Transform Analyze Direct Marketing Gra

	ID	age_group	Gender	FBS
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				

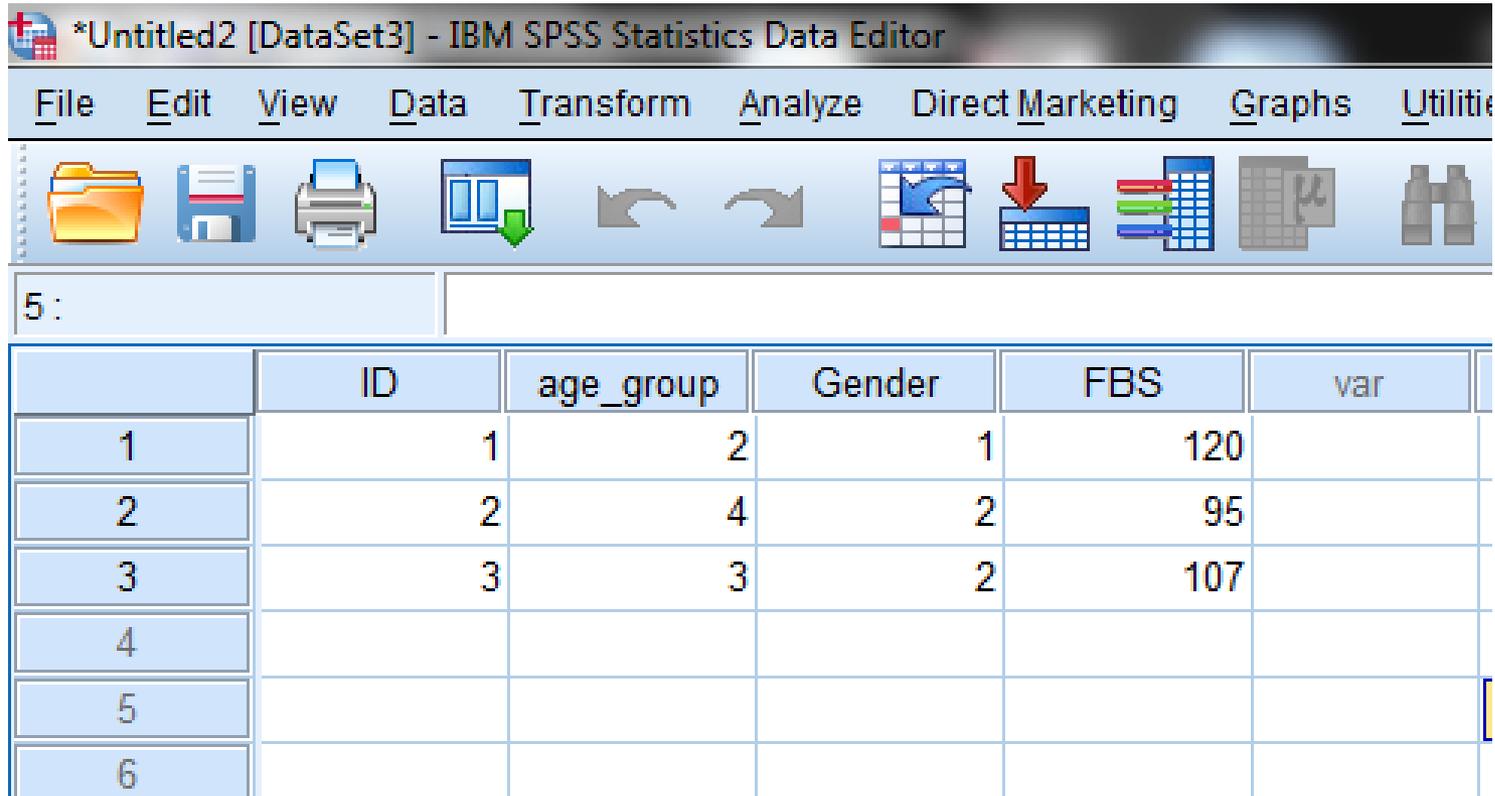
File Edit View Data Transform A

	Name	Type
1	ID	Numeric
2	age_group	Numeric
3	Gender	Numeric
4	FBS	Numeric
5		
6		

Columns	Align	Measure
8	Right	Scale
8	Right	Ordinal
8	Right	Nominal
8	Right	Scale

Data View Variable View

واردن کردن داده های ثبت شده



The screenshot shows the IBM SPSS Statistics Data Editor interface. The title bar reads '*Untitled2 [DataSet3] - IBM SPSS Statistics Data Editor'. The menu bar includes File, Edit, View, Data, Transform, Analyze, Direct Marketing, Graphs, and Utilities. The toolbar contains icons for file operations (folder, save, print, save as), navigation (undo, redo), and data management (import, export, copy, paste). The data grid shows a table with 6 rows and 5 columns. The first three rows contain data, while the last three are empty. The columns are labeled ID, age_group, Gender, FBS, and var.

	ID	age_group	Gender	FBS	var
1	1	2	1	120	
2	2	4	2	95	
3	3	3	2	107	
4					
5					
6					

آشنایی با برخی دستورات در منوی Data

Split File •

Select Cases •

فایل data1

	pn	age	gender	sbp	dbp	cr	bun
1	1	28.00	2	140	90	.90	14.00
2	2	34.00	1	110	75	1.00	14.95
3	3	56.00	2	115	70	1.00	20.00
4	4	47.00	2	130	85	1.40	13.55
5	5	73.00	1	110	70	3.60	33.64
6	7	19.00	1	120	80	1.90	17.28
7	8	87.00	2	120	80	1.00	16.00

albumin	proteinuria	mh	ms	ta	ss	gs	procatg
.	143	2	2	2	.17	.04	1.00
.	510	1	1	2	.33	.13	2.00
4.00	210	2	1	1	.30	.20	1.00
.	600	2	2	1	.15	.35	2.00
3.30	3300	2	2	1	.71	.29	3.00
4.80	60	2	1	1	.00	.33	1.00
0.70	6000	1	2	1	.00	.05	2.00

فایل data1

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
pn	Numeric	8	0	patient number	None	None	8	Center	Scale
age	Numeric	8	2		None	None	8	Center	Scale
gender	Numeric	8	0	gender groups	{1, male}...	None	8	Center	Nominal
sbp	Numeric	8	0	systolic blood pressure	None	None	8	Center	Scale
dbp	Numeric	8	0	diastolic blood pressure	None	None	8	Center	Scale
cr	Numeric	8	2	creatinin	None	None	8	Center	Scale
bun	Numeric	8	2	blood urea nitrogen	None	None	8	Center	Scale
albumin	Numeric	8	2	serum albumin	None	None	8	Center	Scale
proteinuria	Numeric	8	0	proteinuria	None	None	8	Center	Scale
mh	Numeric	8	0	presence of mesantial hyperplasia	{1, yes}...	None	8	Center	Nominal
ms	Numeric	8	0	presence of mesantial sclerosis	{1, yas}...	None	8	Center	Nominal
ta	Numeric	8	0	presence of tubular atrophy	{1, yes}...	None	8	Center	Nominal
ss	Numeric	8	2	percent of segmental scar	None	None	8	Right	Scale
gs	Numeric	8	2	percent of global scar	None	None	8	Right	Scale
procatg	Numeric	8	2	category of proteinuria	{1.00, lowes...	None	8	Right	Ordinal

فایل data1

Name	Type	Label	Values	Missing	Columns	Align	Measure
pn	Numeric	patient number	None	None	8	Center	Scale
age	Numeric		None	None	8	Center	Scale
gender	Numeric	gender groups	{1, male}...	None	8	Center	Nominal
sbp	Numeric	systolic blood pressure	None	None	8	Center	Scale
dbp	Numeric	diastolic blood pressure	None	None	8	Center	Scale
cr	Numeric	creatinin				Center	Scale
bun	Numeric	blood ure				Center	Scale
albumin	Numeric	serum alb				Center	Scale
proteinuria	Numeric	proteinuri				Center	Scale
mh	Numeric	presence				Center	Nominal
ms	Numeric	presence				Center	Nominal
ta	Numeric	percent o				Center	Nominal
ss	Numeric	percent o				Right	Scale
gs	Numeric	category				Right	Scale
procatg	Numeric					Right	Ordinal

Value Labels

Value:

Label:

Spelling...

Add

Change

Remove

1 = "male"
2 = "female"

OK Cancel Help

فایل data1

Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
pn	Numeric								Scale
age	Numeric								Scale
gender	Numeric								Nominal
sbp	Numeric								Scale
dbp	Numeric								Scale
cr	Numeric								Scale
bun	Numeric								Scale
albumin	Numeric								Scale
proteinuria	Numeric								Scale
mh	Numeric								Nominal
ms	Numeric								Nominal
ta	Numeric								Nominal
ss	Numeric								Scale
gs	Numeric								Scale
procatg	Numeric								Ordinal

Name	Type	Width	Decimals	Label	Values
pn	Nu				
age	Nu				
gender	Nu				
sbp	Nu				
dbp	Nu				
cr	Nu				
bun	Nu				
albumin	Nu				
proteinuria	Nu				
mh	Nu				
ms	Nu				
ta	Nu				
ss	Nu				
gs	Nu				
procatg	Numeric	8	2	category of proteinuria	{1.00, lowes...

Value Labels

Value Labels

Value:

Label:

Spelling...

Add
Change
Remove

1.00 = "lowest trough 250"
2.00 = "range 250-2000"
3.00 = "highest trough 2000"

OK Cancel Help

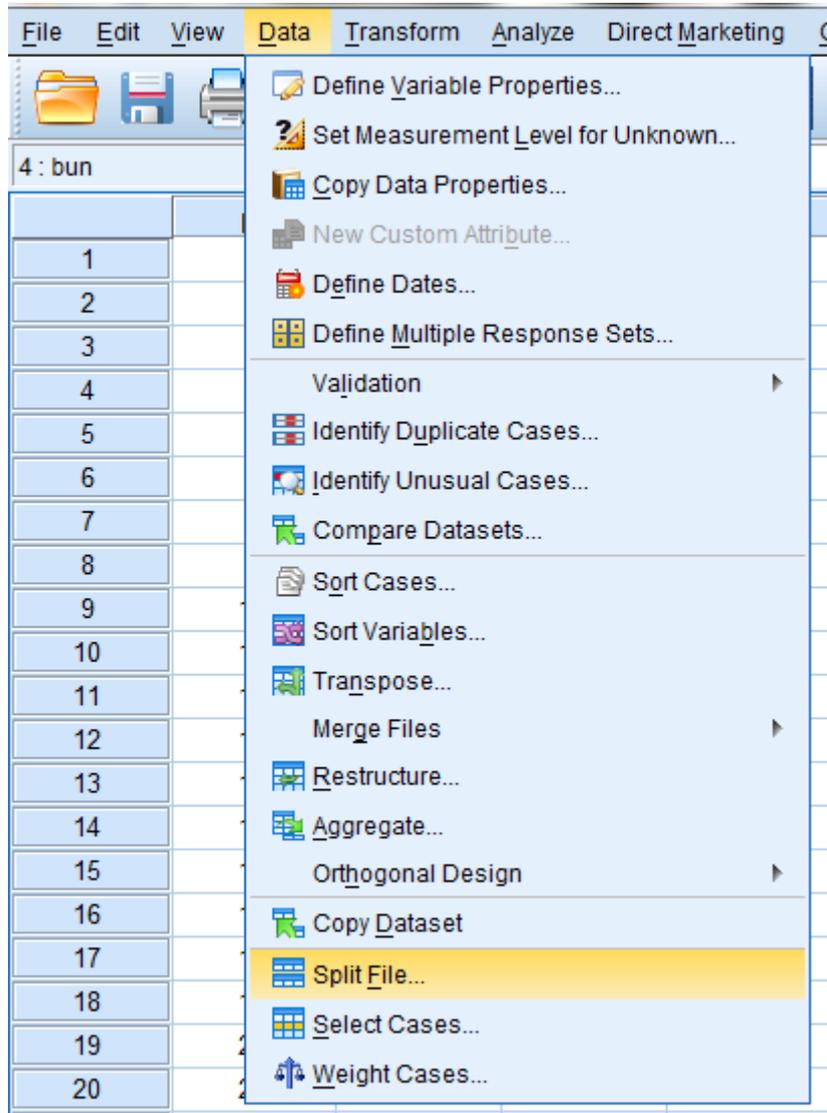
Split File

- طبقه بندی محتویات فایل داده بر اساس سطوح مختلف یک یا چند متغیر کیفی.

Compare groups –

Organize output by groups –

Split File



Split File

File Edit View **Data** Transform Analyze Direct Marketing G

4 : bun

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Define Variable Properties...
Set Measurement Level for Selected Variables...
Copy Data Properties
New Custom Attribute
Define Dates...
Define Multiple Relationships
Validation
Identify Duplicate Cases
Identify Unusual Cases
Compare Datasets
Sort Cases...
Sort Variables...
Transpose...
Merge Files
Restructure...
Aggregate...
Orthogonal Design
Copy Dataset
Split File...
Select Cases...
Weight Cases...

Split File

patient number [pn]
age
gender groups [g...]
systolic blood pre...
diastolic blood pr...
creatinin [cr]
blood urea nitrog...
serum albumin [a...]
proteinuria [protei...
presence of mes...

Analyze all cases, do not create groups
 Compare groups
 Organize output by groups

Groups Based on:

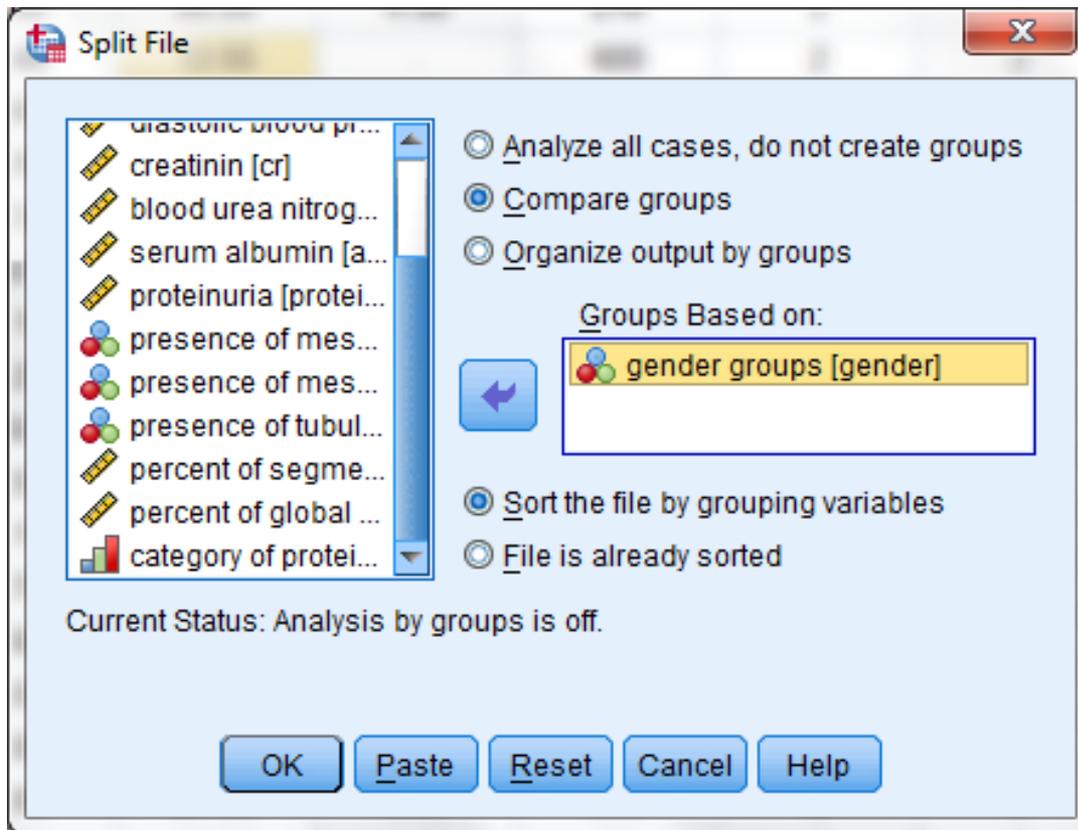
Sort the file by grouping variables
 File is already sorted

Current Status: Analysis by groups is off.

OK Paste Reset Cancel Help

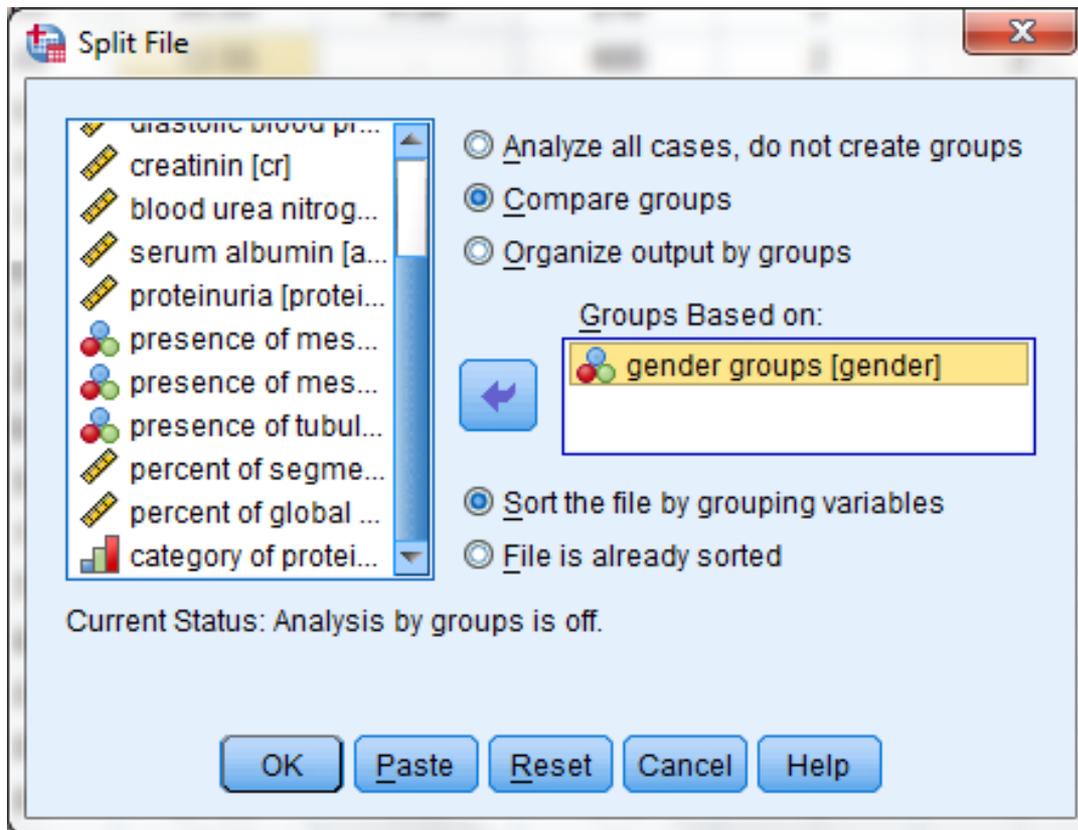
Split File

Compare groups •



Split File

Compare groups •



Output file

`SORT CASES BY gender.
SPLIT FILE LAYERED BY gender.`

Split File

Compare groups •

Descriptive Statistics

gender groups		N	Minimum	Maximum	Mean	Std. Deviation
male	age	31	11.00	73.00	35.2903	17.90381
	Valid N (listwise)	31				
female	age	19	15.00	63.00	35.0000	13.37078
	Valid N (listwise)	19				

Split File

Compare groups •

Descriptive Statistics

gender groups		N	Minimum	Maximum	Mean	Std. Deviation
male	age	31	11.00	73.00	35.2903	17.90381
	Valid N (listwise)	31				
female	age	19	15.00	63.00	35.0000	13.37078
	Valid N (listwise)	19				

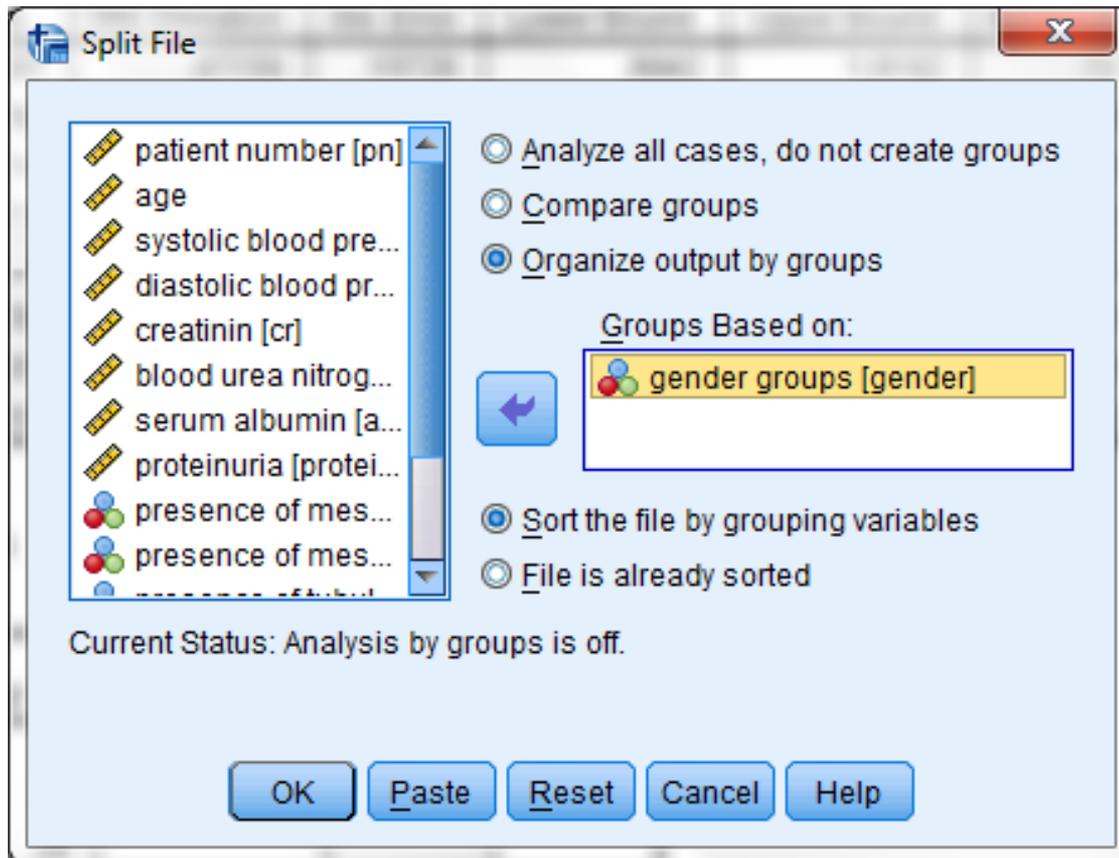
ANOVA

creatinin

gender groups		Sum of Squares	df	Mean Square	F	Sig.
male	Between Groups	2.073	2	1.036	1.885	.172
	Within Groups	14.297	26	.550		
	Total	16.369	28			
female	Between Groups	.698	2	.349	1.054	.372
	Within Groups	5.303	16	.331		
	Total	6.001	18			

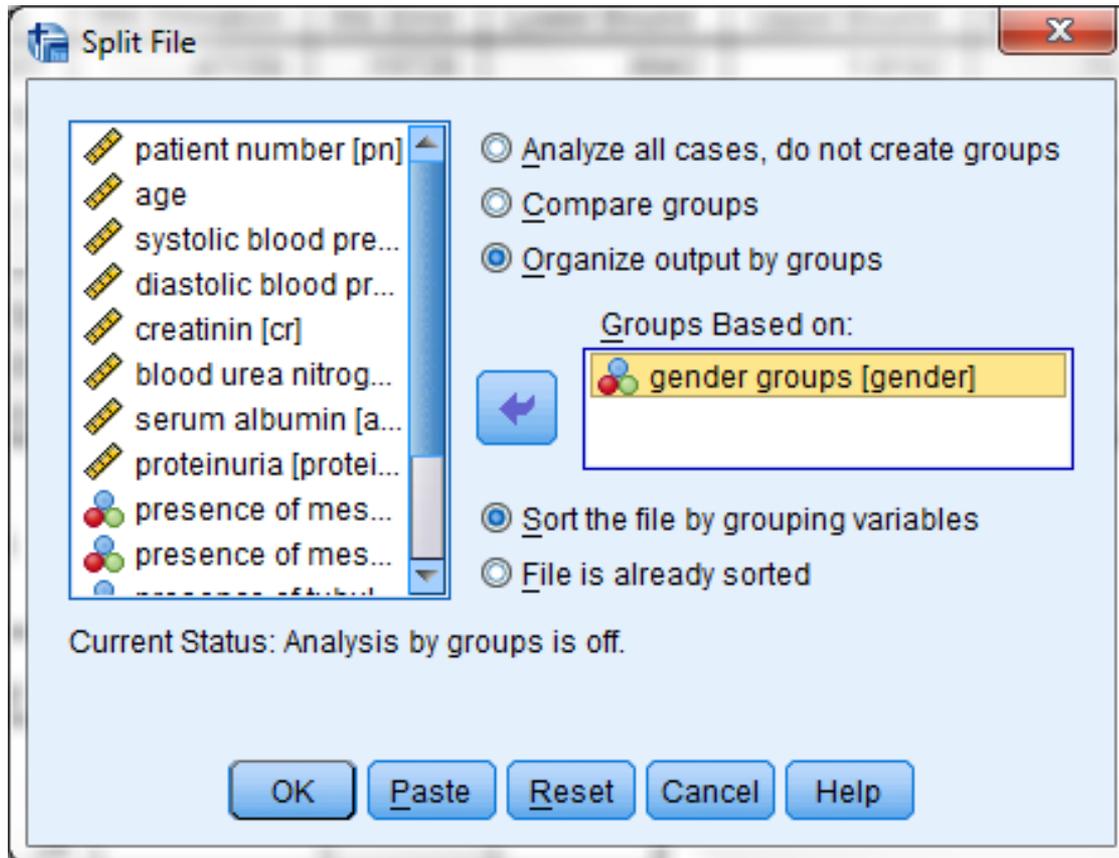
Split File

Organize output by groups •



Split File

Organize output by groups •



Output file

```
SORT CASES BY gender.  
SPLIT FILE SEPARATE BY gender.
```

Split File

Organize output by groups •

gender groups = male

Descriptive Statistics^a

	N	Minimum	Maximum	Mean	Std. Deviation
age	31	11.00	73.00	35.2903	17.90381
Valid N (listwise)	31				

a. gender groups = male

gender groups = female

Descriptive Statistics^a

	N	Minimum	Maximum	Mean	Std. Deviation
age	19	15.00	63.00	35.0000	13.37078
Valid N (listwise)	19				

a. gender groups = female

Split File

Organize output by groups •

gender groups = male

ANOVA^a

creatinin

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.073	2	1.036	1.885	.172
Within Groups	14.297	26	.550		
Total	16.369	28			

a. gender groups = male

gender groups = female

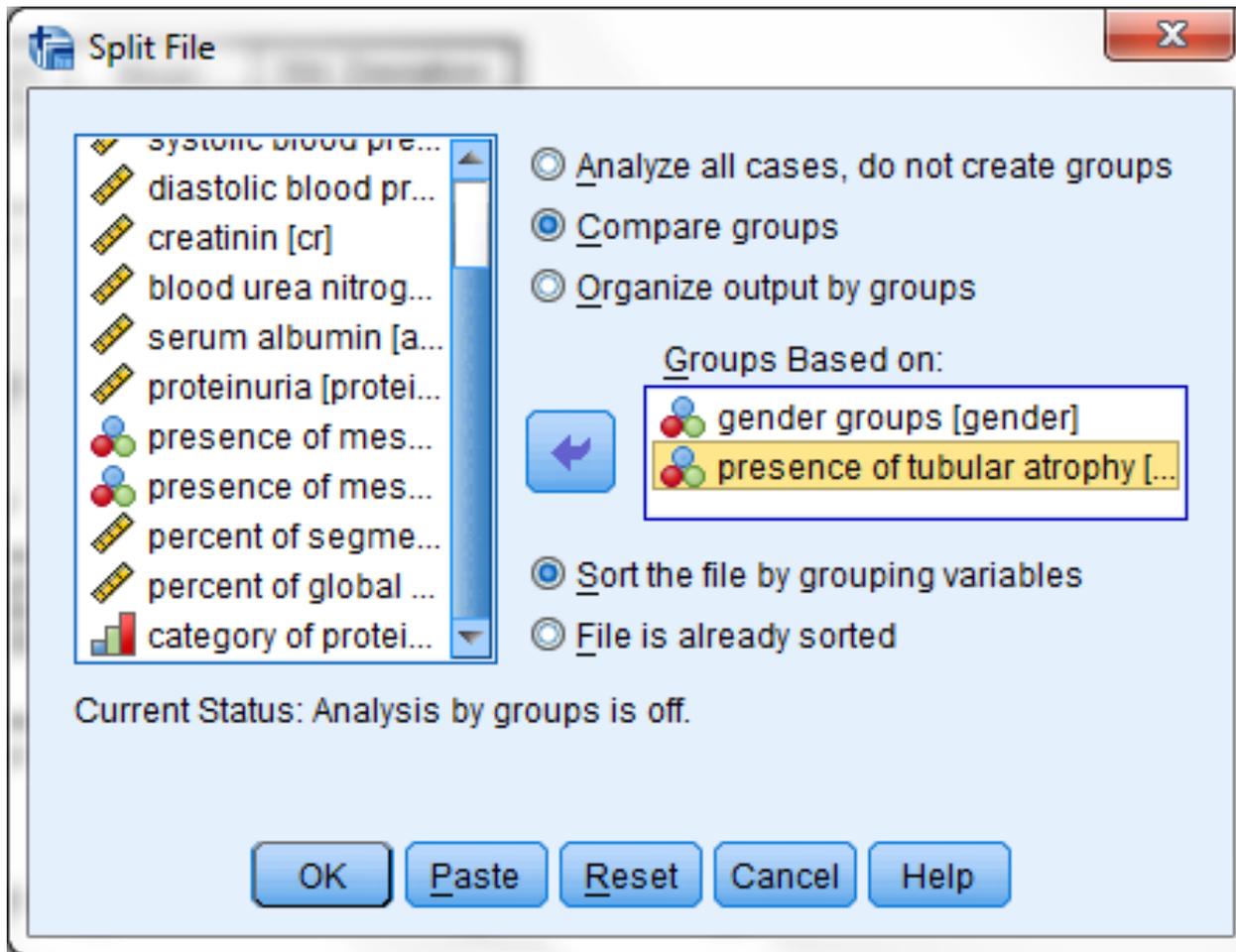
ANOVA^a

creatinin

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.698	2	.349	1.054	.372
Within Groups	5.303	16	.331		
Total	6.001	18			

a. gender groups = female

Split File

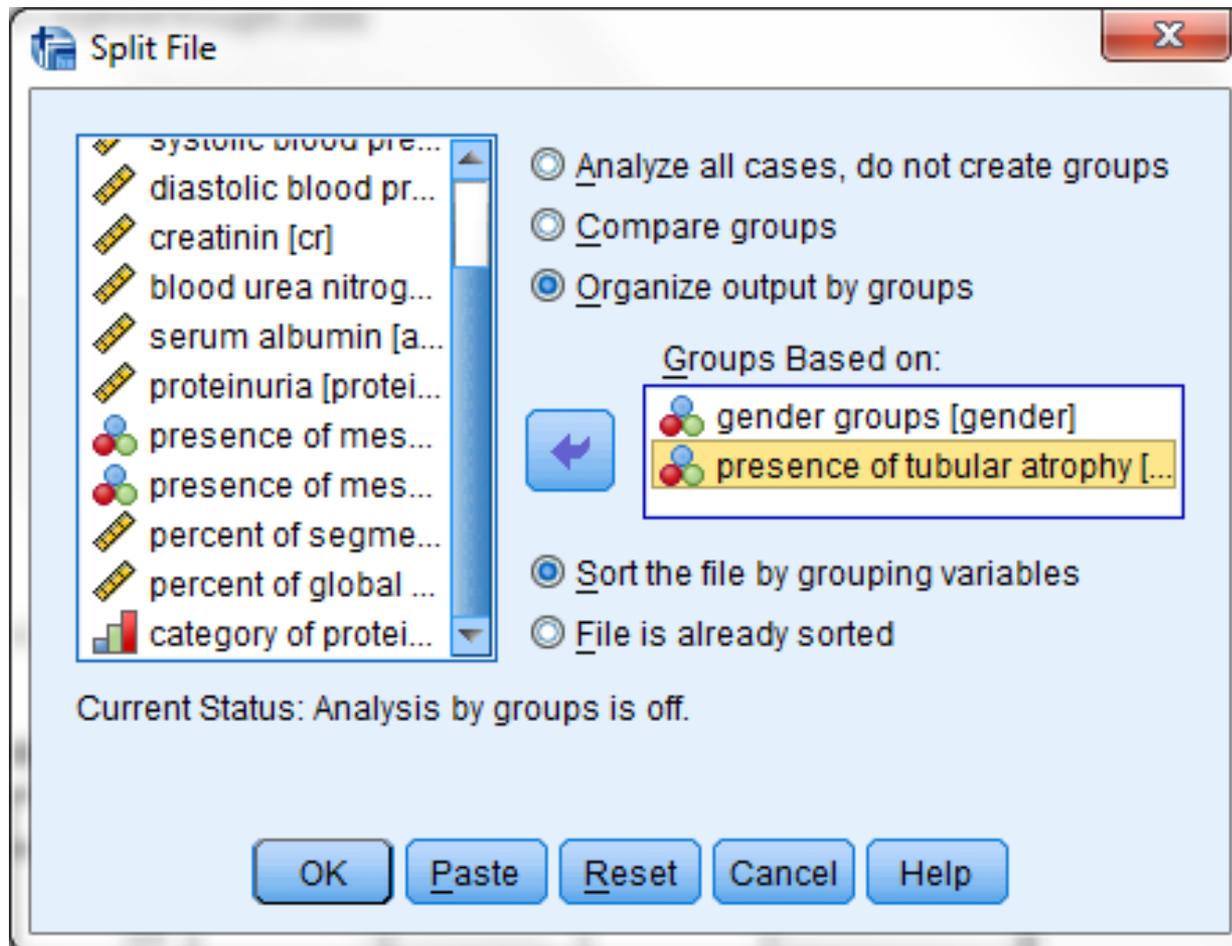


Split File

Descriptive Statistics

gender groups	presence of tubular atrophy		N	Minimum	Maximum	Mean	Std. Deviation
male	yes	age	23	11.00	73.00	34.7391	17.66665
		Valid N (listwise)	23				
male	no	age	8	11.00	73.00	36.8750	19.72263
		Valid N (listwise)	8				
female	yes	age	15	15.00	63.00	35.2000	14.37856
		Valid N (listwise)	15				
female	no	age	4	24.00	47.00	34.2500	10.34005
		Valid N (listwise)	4				

Split File



gender groups = male, presence of tubular atrophy = yes

Descriptive Statistics^a

	N	Minimum	Maximum	Mean	Std. Deviation
age	23	11.00	73.00	34.7391	17.66665
Valid N (listwise)	23				

a. gender groups = male, presence of tubular atrophy = yes

gender groups = male, presence of tubular atrophy = no

Descriptive Statistics^a

	N	Minimum	Maximum	Mean	Std. Deviation
age	8	11.00	73.00	36.8750	19.72263
Valid N (listwise)	8				

a. gender groups = male, presence of tubular atrophy = no

gender groups = female, presence of tubular atrophy = yes

Descriptive Statistics^a

	N	Minimum	Maximum	Mean	Std. Deviation
age	15	15.00	63.00	35.2000	14.37856
Valid N (listwise)	15				

a. gender groups = female, presence of tubular atrophy = yes

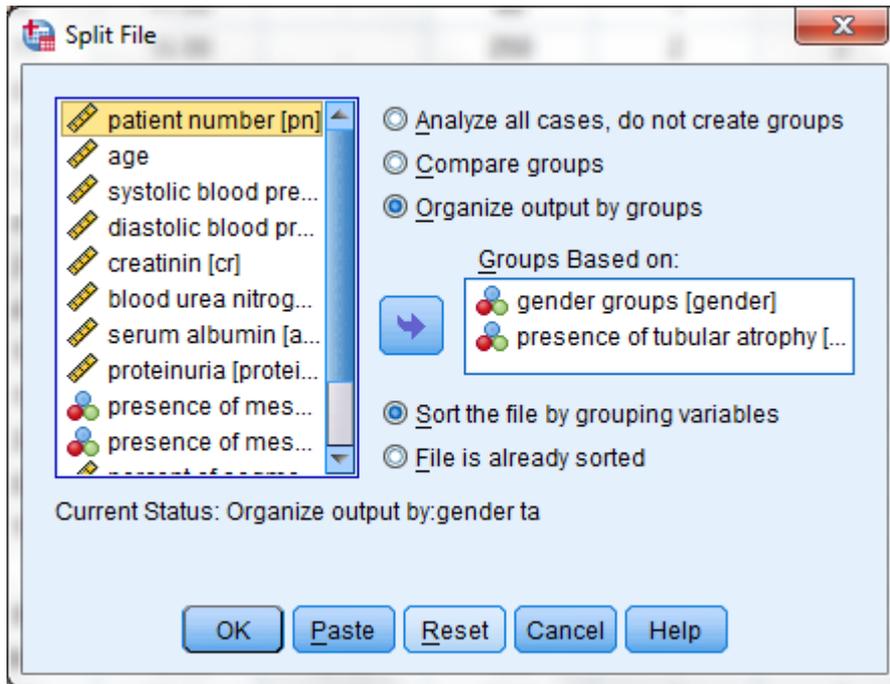
gender groups = female, presence of tubular atrophy = no

Descriptive Statistics^a

	N	Minimum	Maximum	Mean	Std. Deviation
age	4	24.00	47.00	34.2500	10.34005
Valid N (listwise)	4				

a. gender groups = female, presence of tubular atrophy = no

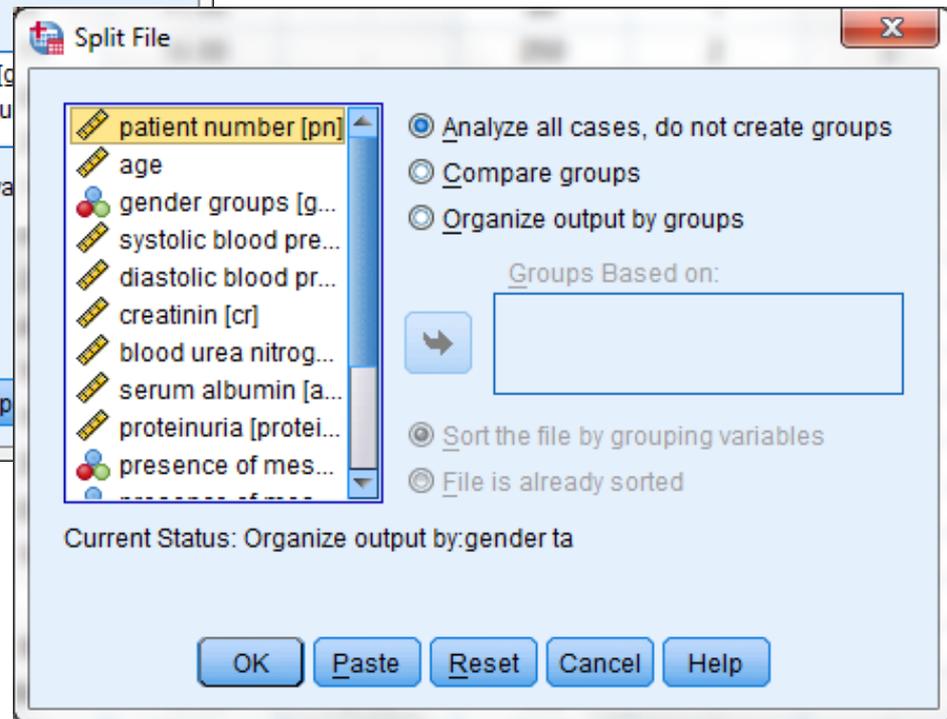
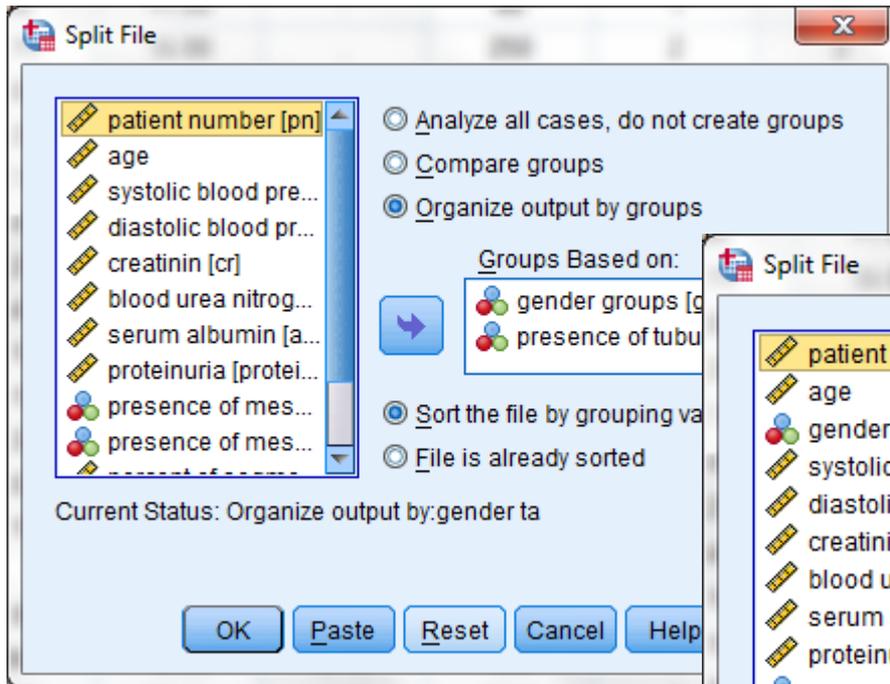
Split File



Reset •

Split File

Reset •



Select Cases

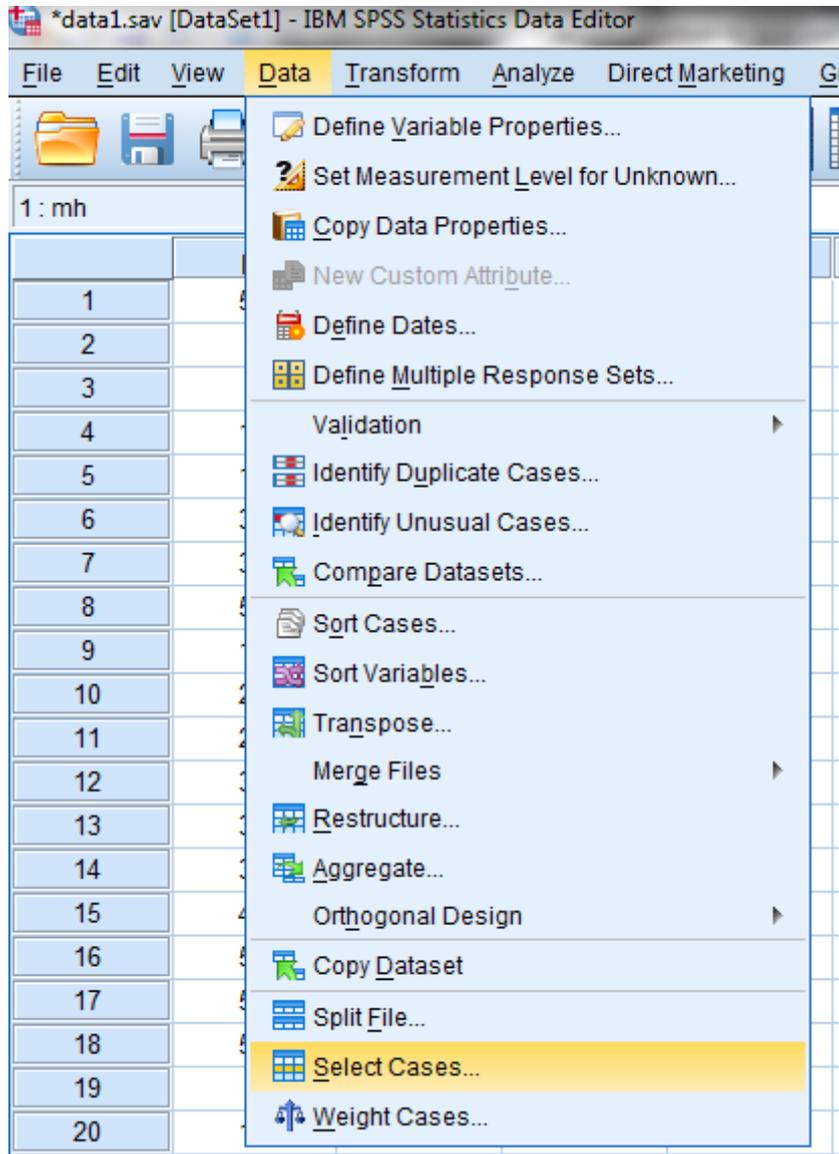
- آنالیز داده ها برای بخشی از نمونه ها

If condition is satisfied –

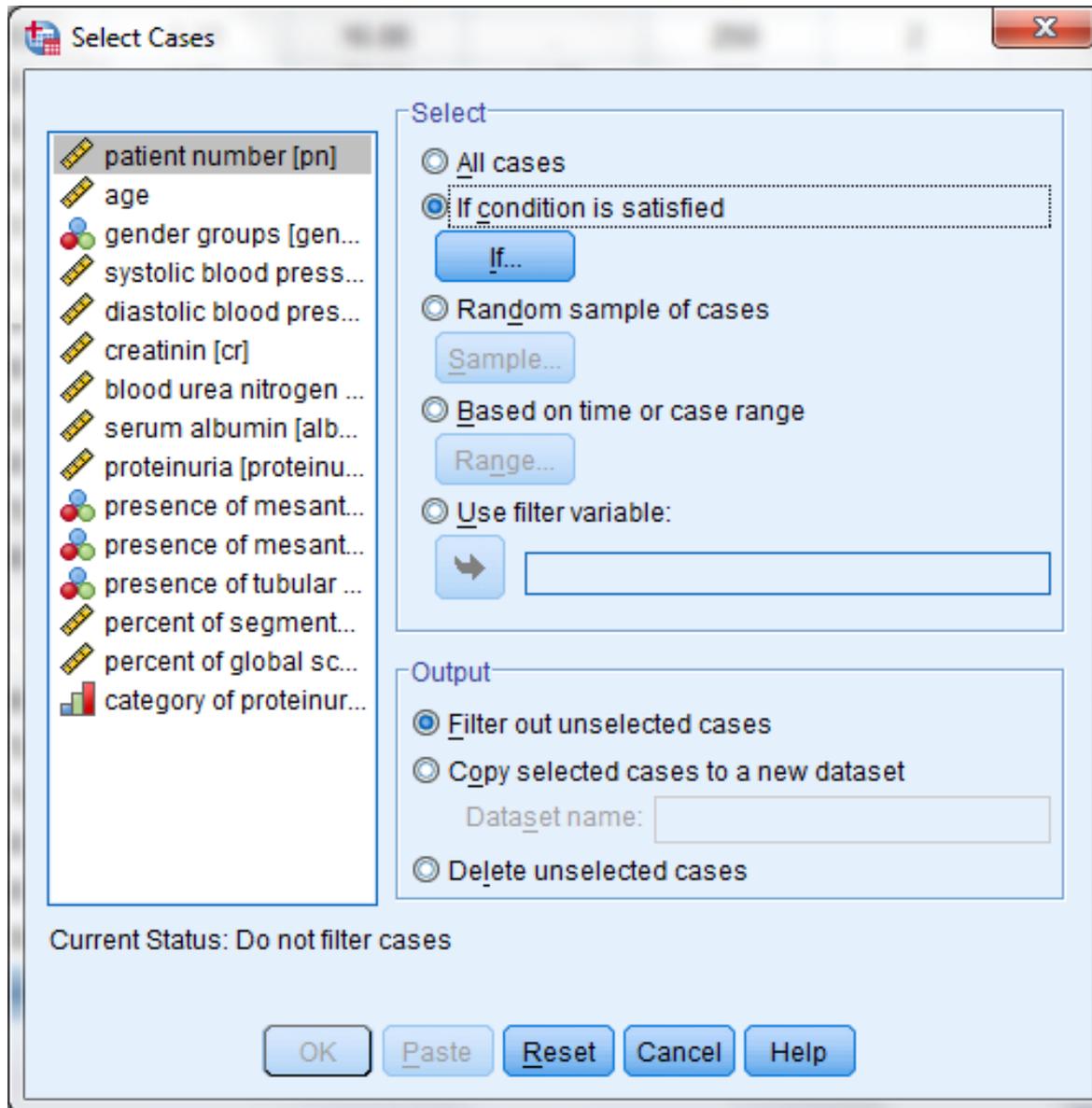
Random sample of cases –

Based on time or case range –

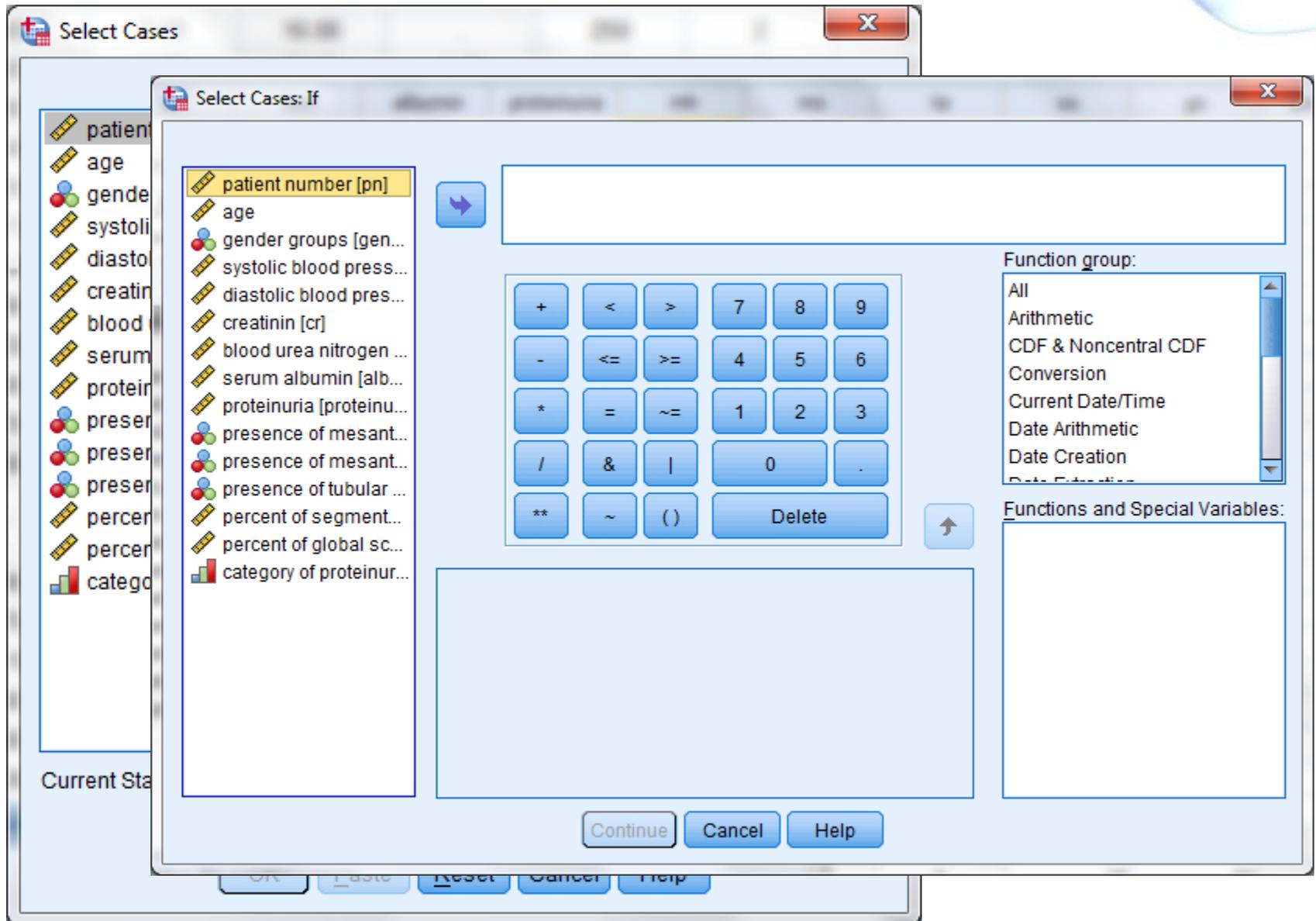
Select Cases



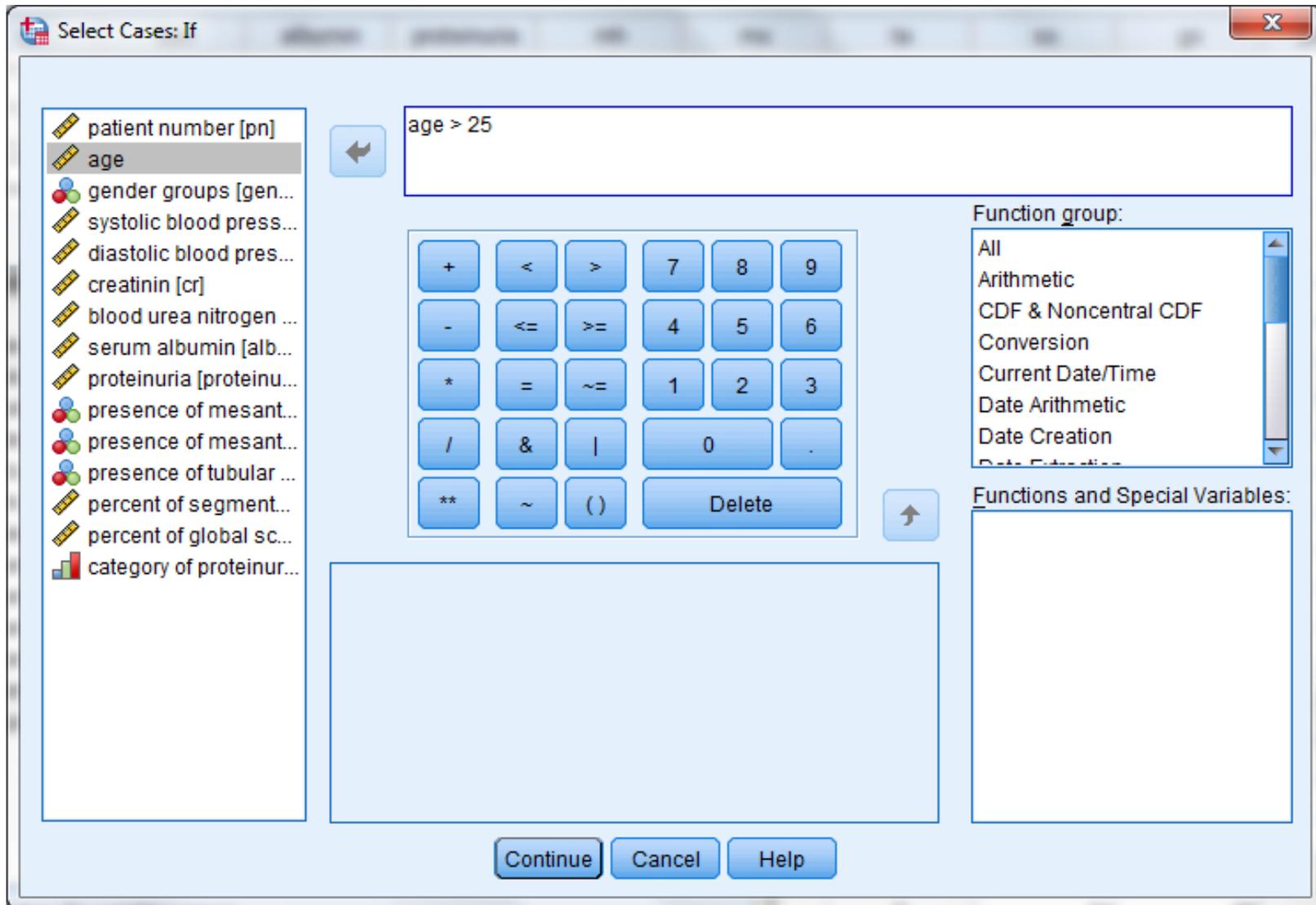
Select Cases



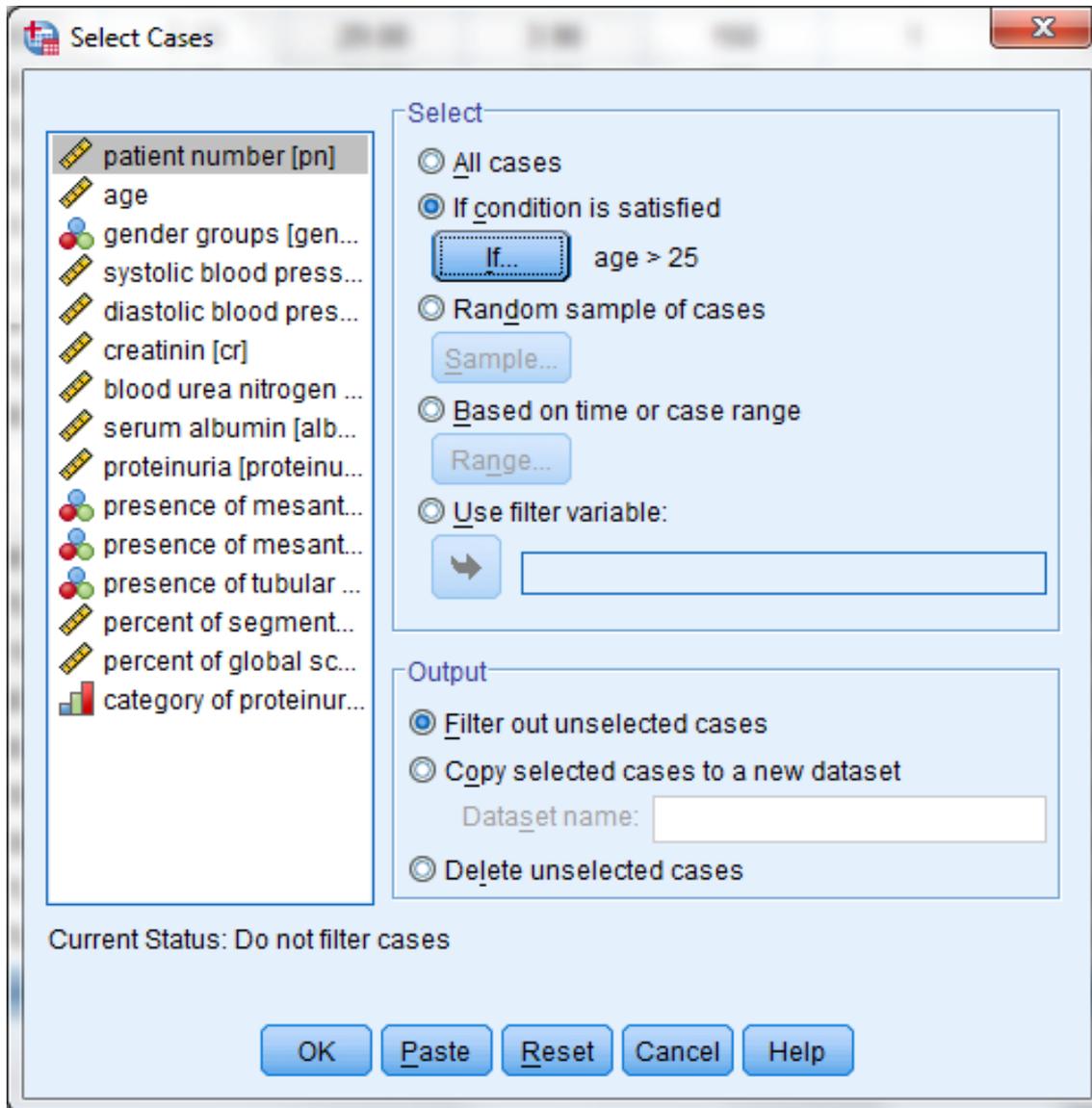
Select Cases



Select Cases



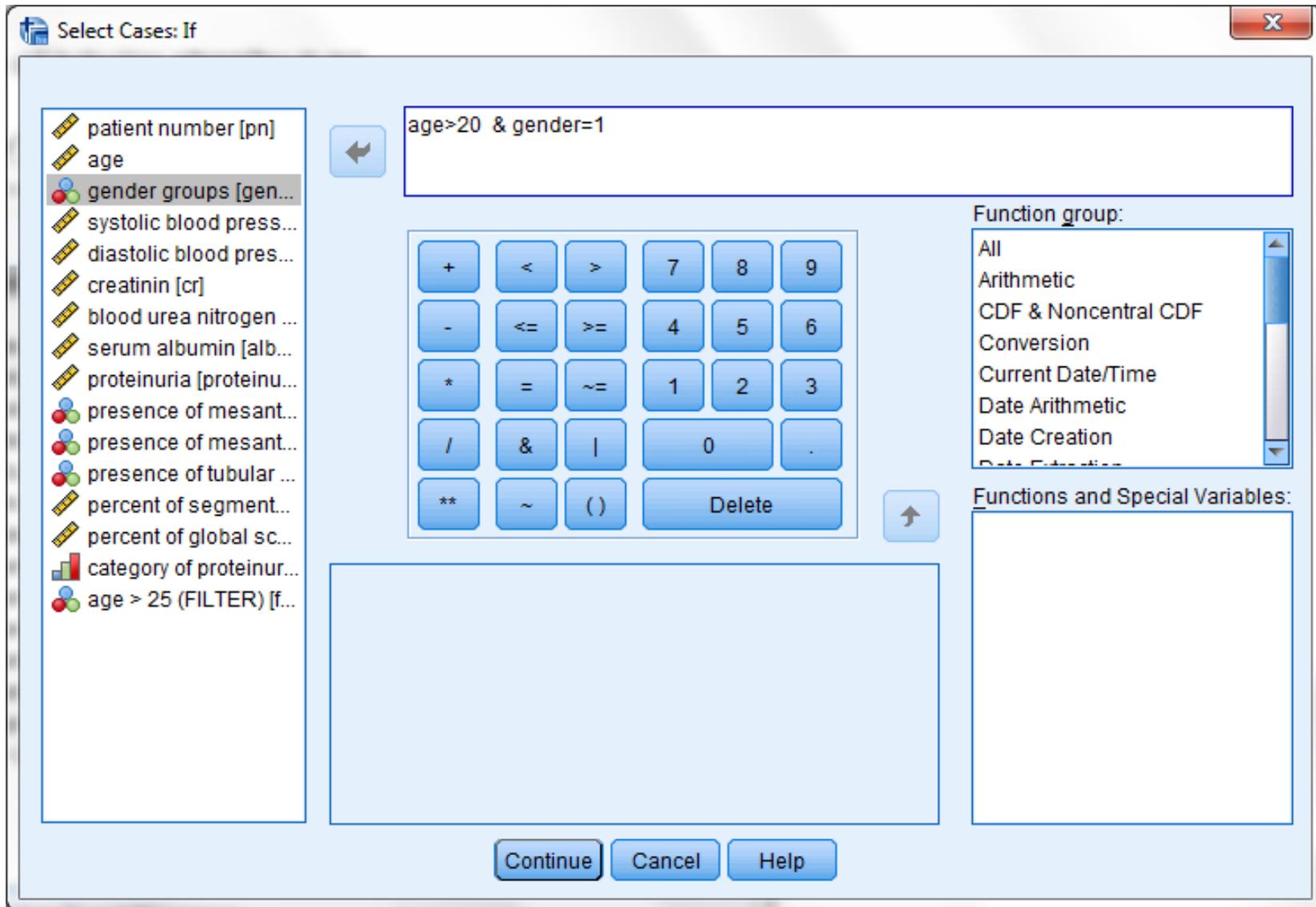
Select Cases



Select Cases

	pn	age	
1	53	11.00	
2	7	19.00	
3	9	23.00	
4	14	36.00	
5	19	30.00	
6	33	25.00	
7	38	31.00	
8	51	38.00	
9	11	26.00	
10	25	29.00	
11	29	20.00	
12	30	41.00	
13	31	.	
14	37	34.00	
15	48	65.00	

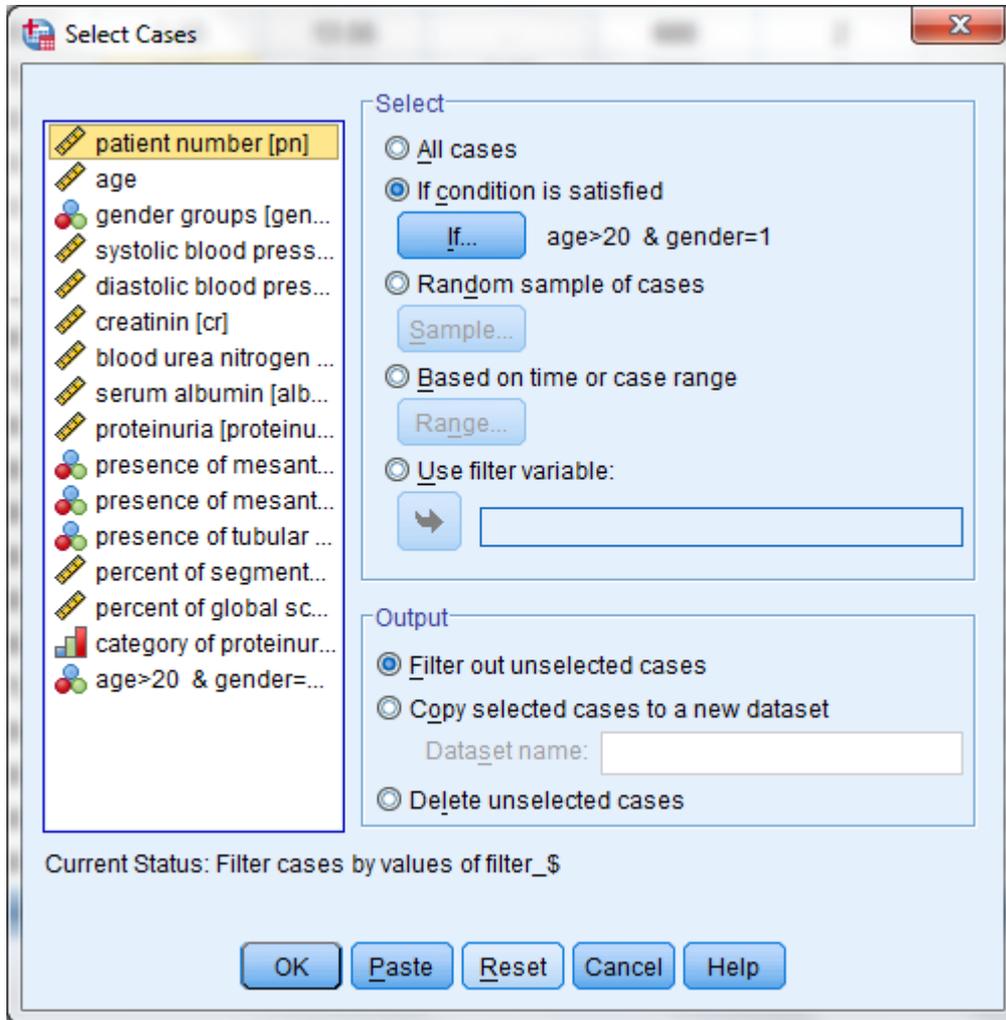
Select Cases



Select Cases

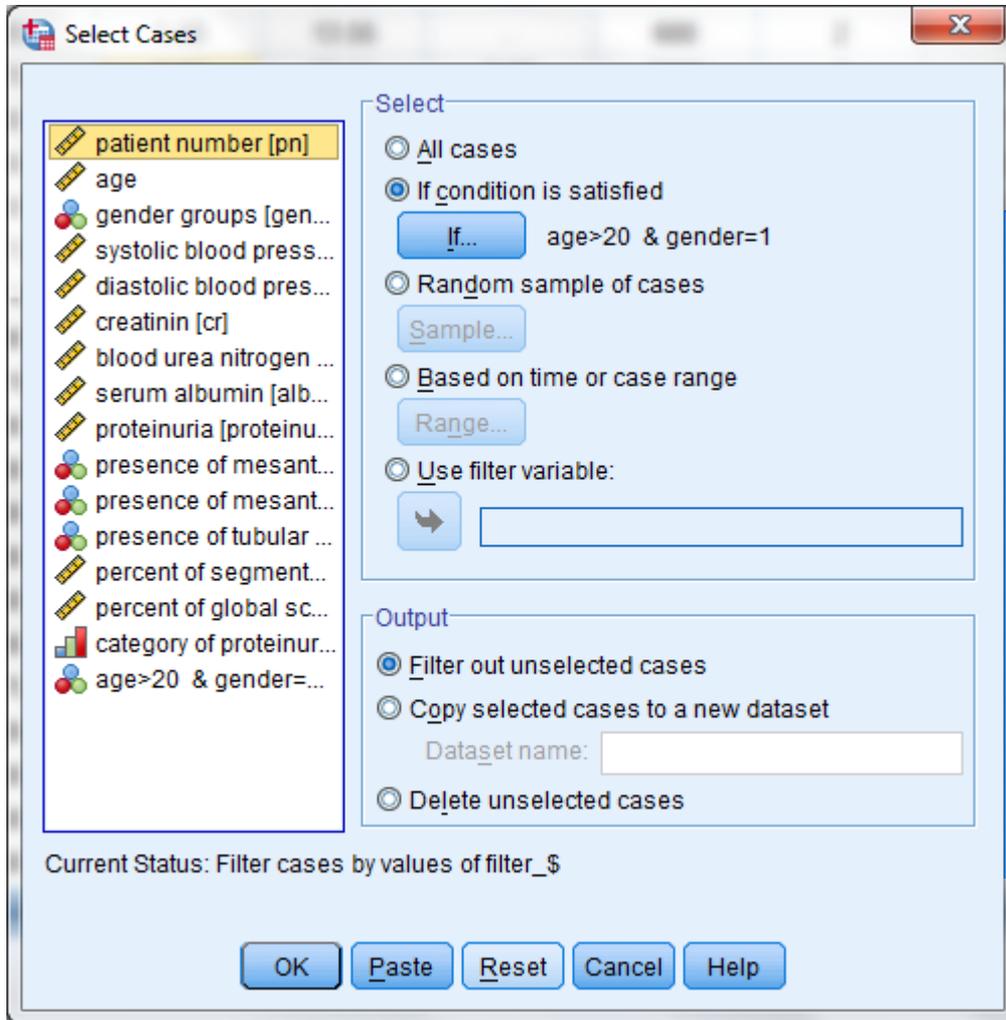
	pn	age	gender
1	1	28.00	2
2	2	34.00	1
3	3	56.00	2
4	4	47.00	2
5	5	73.00	1
6	7	19.00	1
7	8	27.00	2
8	9	23.00	1
9	10	23.00	2
10	11	26.00	1
11	12	43.00	2
12	13	54.00	1
13	14	36.00	1
14	15	73.00	1

Select Cases



Reset •

Select Cases



Reset •

	pn	age	gender
1	1	28.00	2
2	2	34.00	1
3	3	56.00	2
4	4	47.00	2
5	5	73.00	1
6	7	19.00	1
7	8	27.00	2
8	9	23.00	1
9	10	23.00	2
10	11	26.00	1
11	12	43.00	2
12	13	54.00	1
13	14	22.00	1

کاربرد دستورات Compute و Recode

- Compute variable
- محاسبه یک متغیر جدید بر اساس سایر متغیرهای موجود
- Recode
 - Recode into same variable
 - Recode into different variable

Compute variable

• مثال:

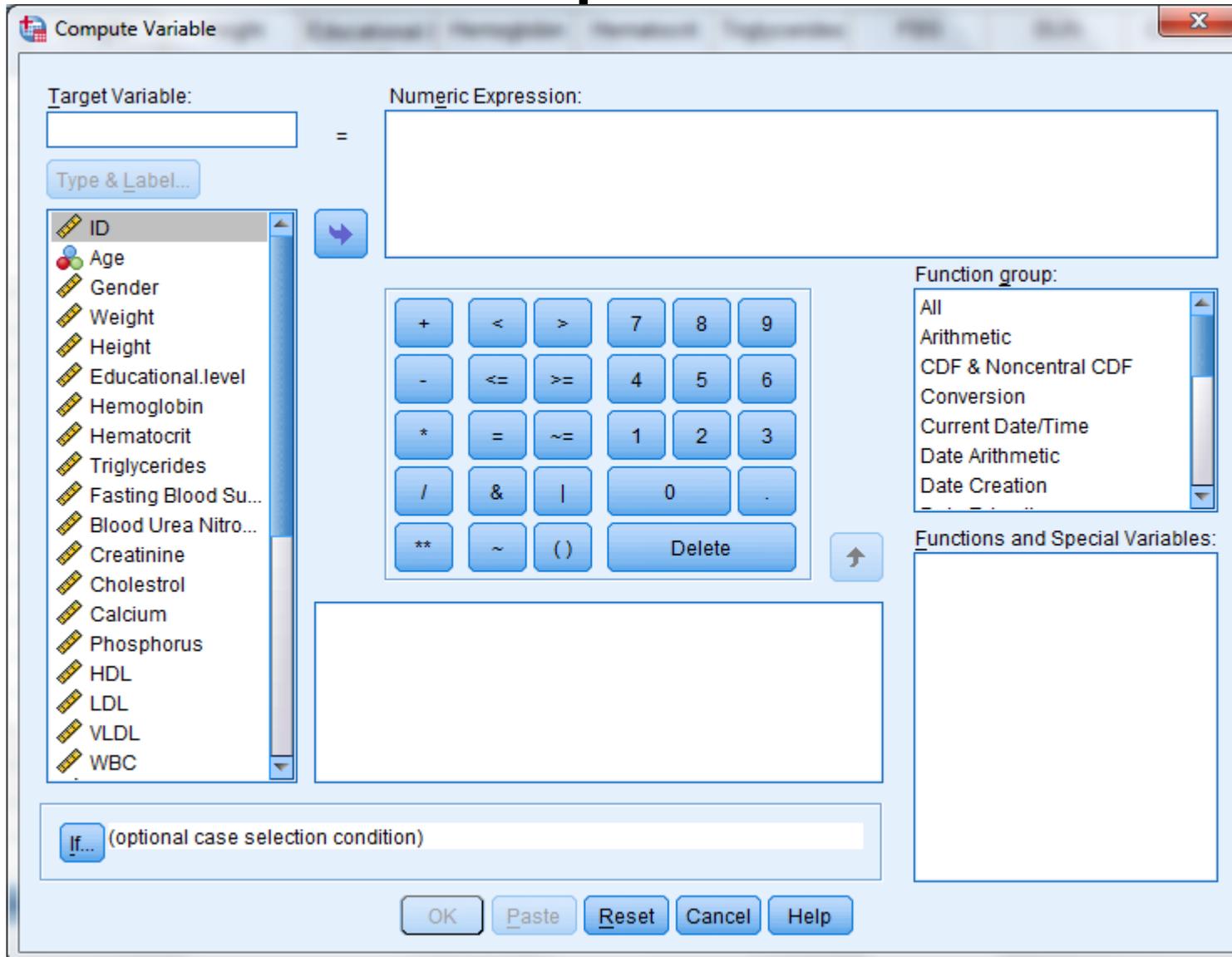
- محاسبه شاخص توده بدنی از روی وزن و قد افراد (data2)
- محاسبه نمره سلامت روان افراد بر اساس سوالات پرسشنامه (data3)

Compute variable

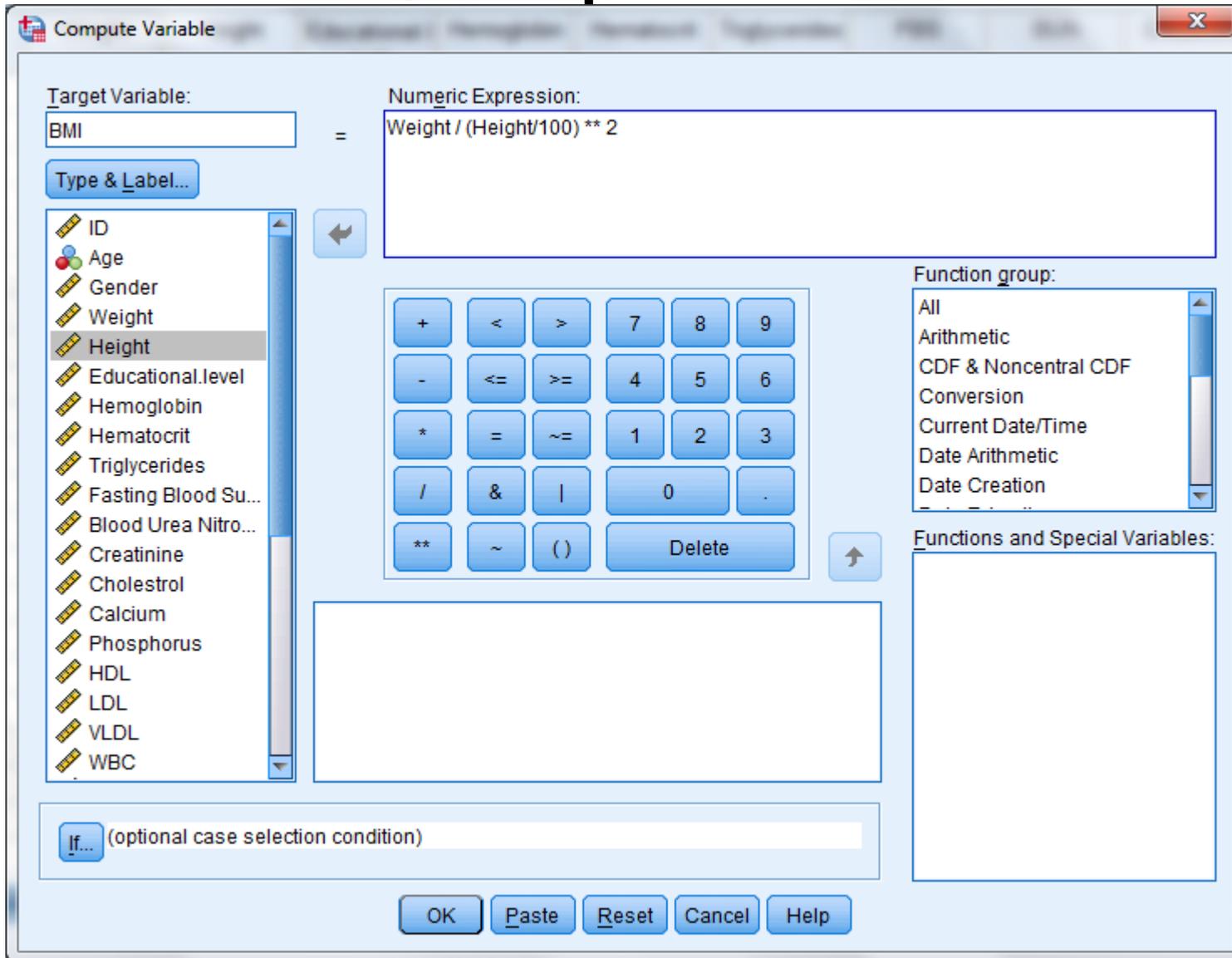
The screenshot shows the IBM SPSS Statistics Data Editor interface. The title bar reads "data2.sav [DataSet13] - IBM SPSS Statistics Data Editor". The menu bar includes "File", "Edit", "View", "Data", "Transform", "Analyze", "Direct Marketing", and "Graphs". The "Transform" menu is open, and the "Compute Variable..." option is highlighted. Below the menu, a data grid is visible with columns "ID" and "1" through "15".

ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1														
2	2														
3	3														
4	4														
5	5														
6	6														
7	7														
8	8														
9	9														
10	10														
11	11														
12	12														
13	13	63	1	113											
14	14	44	2	98											
15	15	60	1	67											

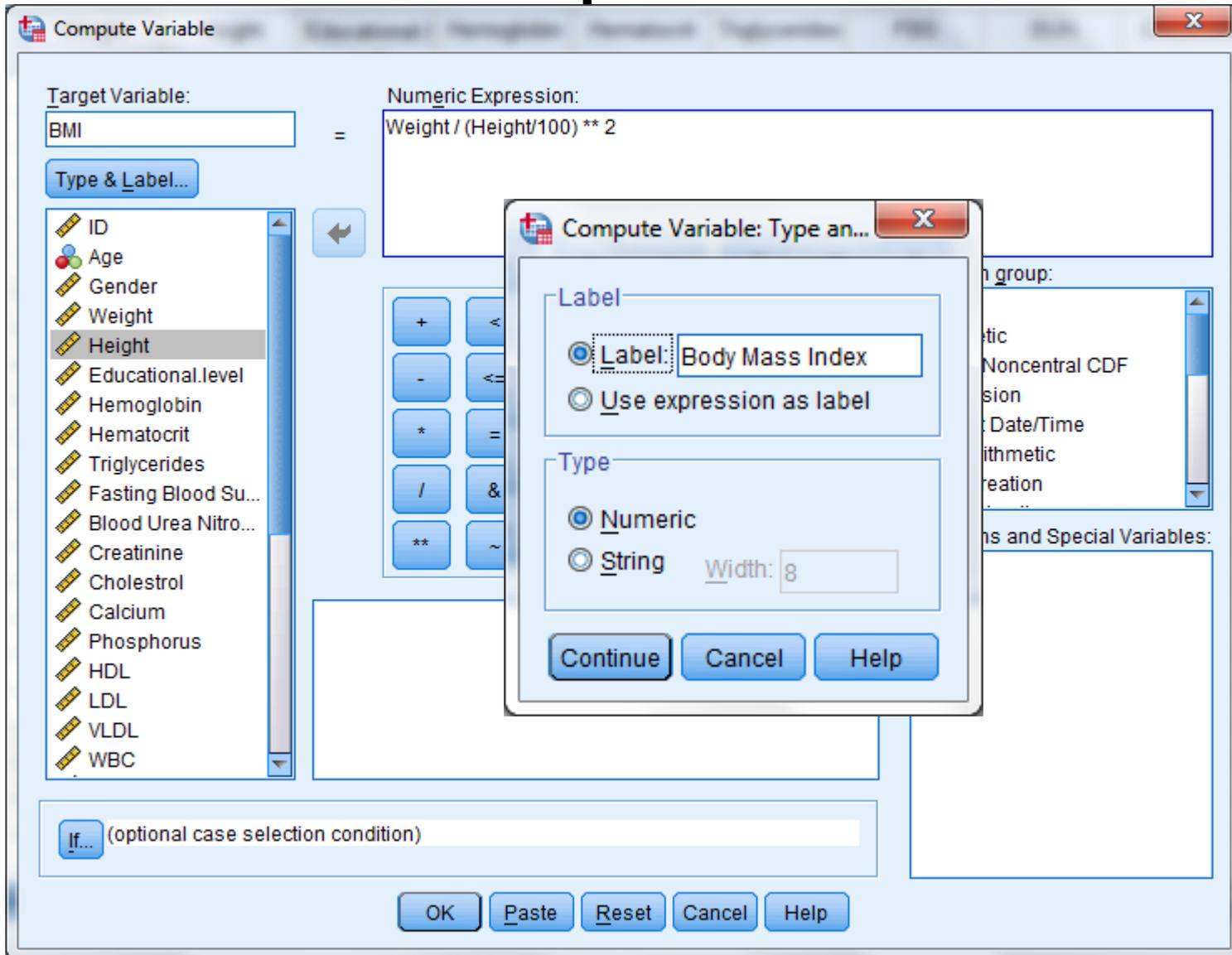
Compute variable



Compute variable



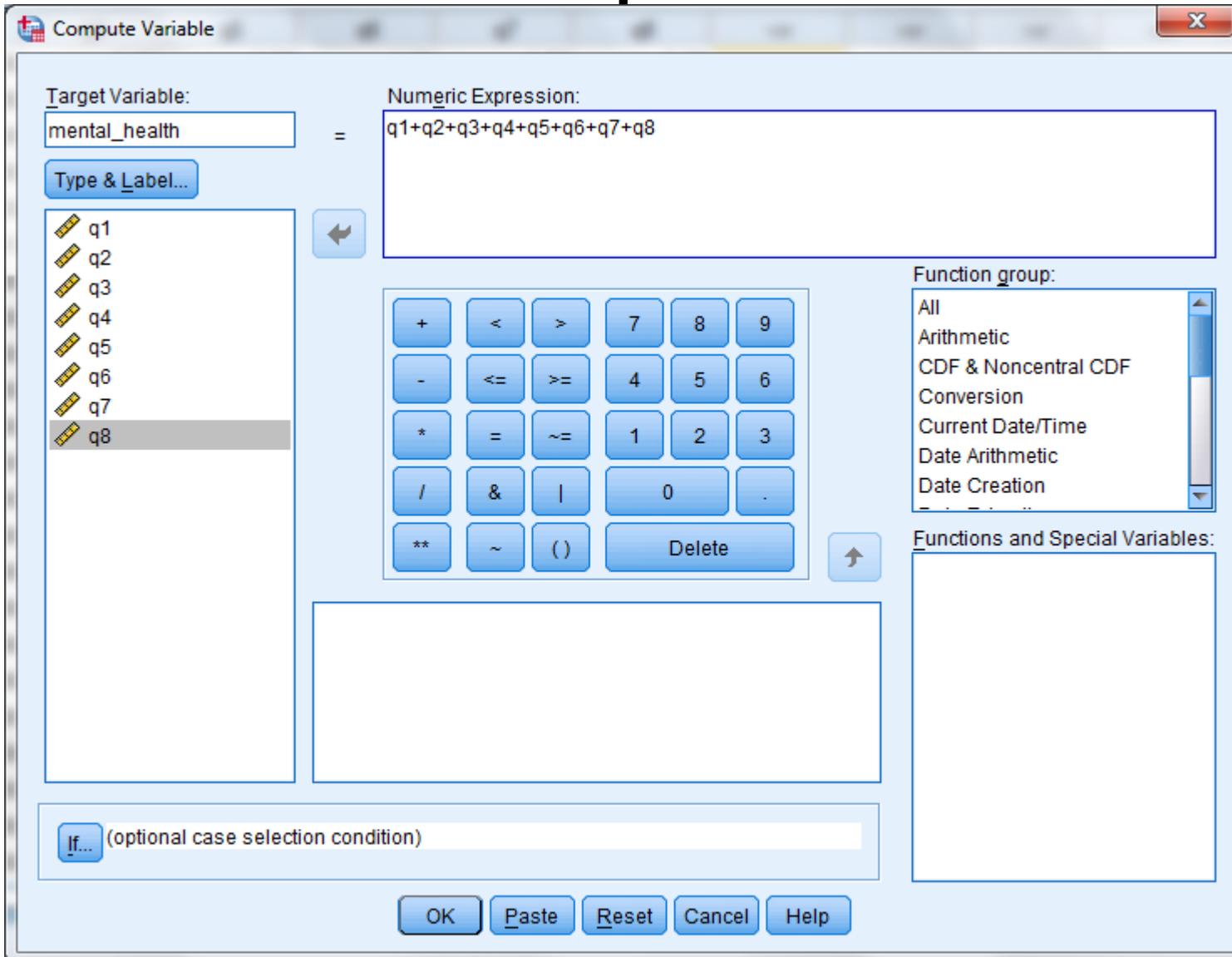
Compute variable



Compute variable

Urin.Blood	Urin.Bil	BMI	var	
2	1	23.88		
2	2	29.78		
2	1	36.16		
2	2	20.98		
1	1	17.44		
1	2	20.57		
1	1	21.45		
1	1	26.85		
1	1	20.91		
2	1	21.95		
1	2	25.20		
2	2	30.86		
1	2	31.30		
2	1	30.25		
2	1	23.46		
2	1	20.98		
1	1	23.99		
1	1	24.11		
1	1	31.22		
1	2	30.49		
1	2	26.87		
1	2	24.00		
1	2	24.73		

Compute variable



Compute variable

q7	q8	mental_health	var
1.00	5.00	19.00	
2.00	4.00	21.00	
3.00	3.00	22.00	
4.00	2.00	25.00	
5.00	1.00	25.00	
5.00	1.00	27.00	
4.00	2.00	14.00	
3.00	1.00	14.00	
2.00	2.00	15.00	
1.00	1.00	13.00	
3.00	2.00	17.00	
3.00	1.00	17.00	
3.00	2.00	17.00	
4.00	3.00	23.00	
5.00	1.00	21.00	
5.00	2.00	23.00	
4.00	1.00	23.00	
4.00	2.00	21.00	
5.00	2.00	22.00	

Recode

- تغییر کد یک متغیر کیفی و یا گروهبندی یک متغیر کمی

Recode into same variable –

- به متغیر اولیه نیازی نداریم و روی همان متغیر گروهبندی های جدید جایگزین می شود.

Recode into different variable –

- قصد داریم متغیر اصلی را داشته باشیم

Recode into same variable

- طیف لیکرت در پرسشنامه

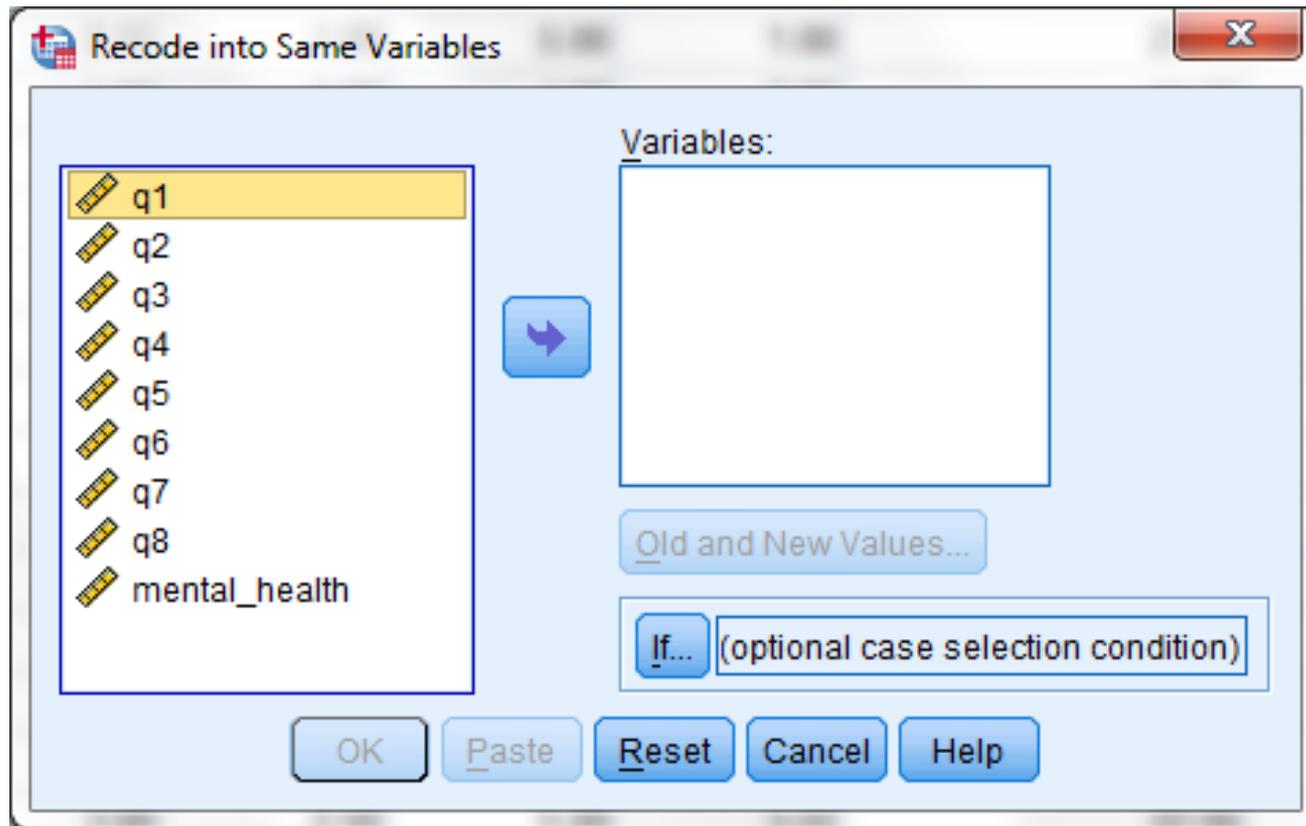
گزینه	کاملاً مخالف	مخالف	نظری ندارم	موافق	کاملاً موافق
سوال مثبت	۱	۲	۳	۴	۵
سوال منفی	۵	۴	۳	۲	۱

Recode into same variable

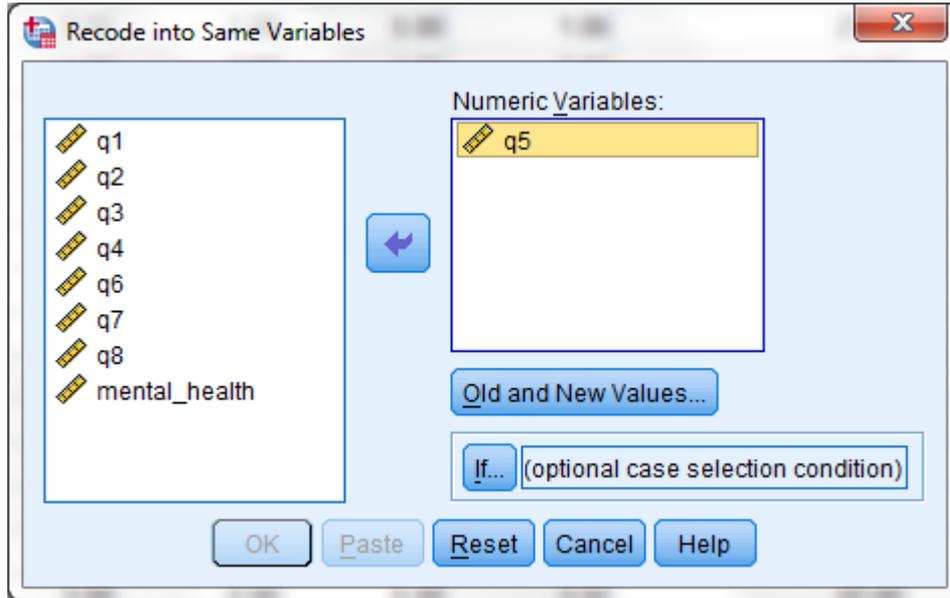
The screenshot shows the IBM SPSS Statistics Data Editor interface. The title bar reads '*data3.sav [DataSet14] - IBM SPSS Statistics Data Editor'. The menu bar includes File, Edit, View, Data, Transform, Analyze, Direct Marketing, and Graphs. The 'Transform' menu is open, displaying the following options: Compute Variable..., Count Values within Cases..., Shift Values..., Recode into Same Variables... (highlighted), Recode into Different Variables..., Automatic Recode..., Visual Binning..., Optimal Binning..., Prepare Data for Modeling, Rank Cases..., Date and Time Wizard..., Create Time Series..., Replace Missing Values..., Random Number Generators..., and Run Pending Transforms (Ctrl+G). The data grid shows a variable 'q1' with values ranging from 1.00 to 5.00. The first 13 rows are visible, with the 14th row showing values for other variables (5.00, 2.00, 5.00).

	q1			
1	1.00			
2	1.00			
3	2.00			
4	2.00			
5	3.00			
6	4.00			
7	1.00			
8	2.00			
9	2.00			
10	1.00			
11	1.00			
12	1.00			
13	1.00			
14	1.00	5.00	2.00	5.00
15	1.00	5.00	1.00	5.00
16	1.00	4.00	4.00	4.00

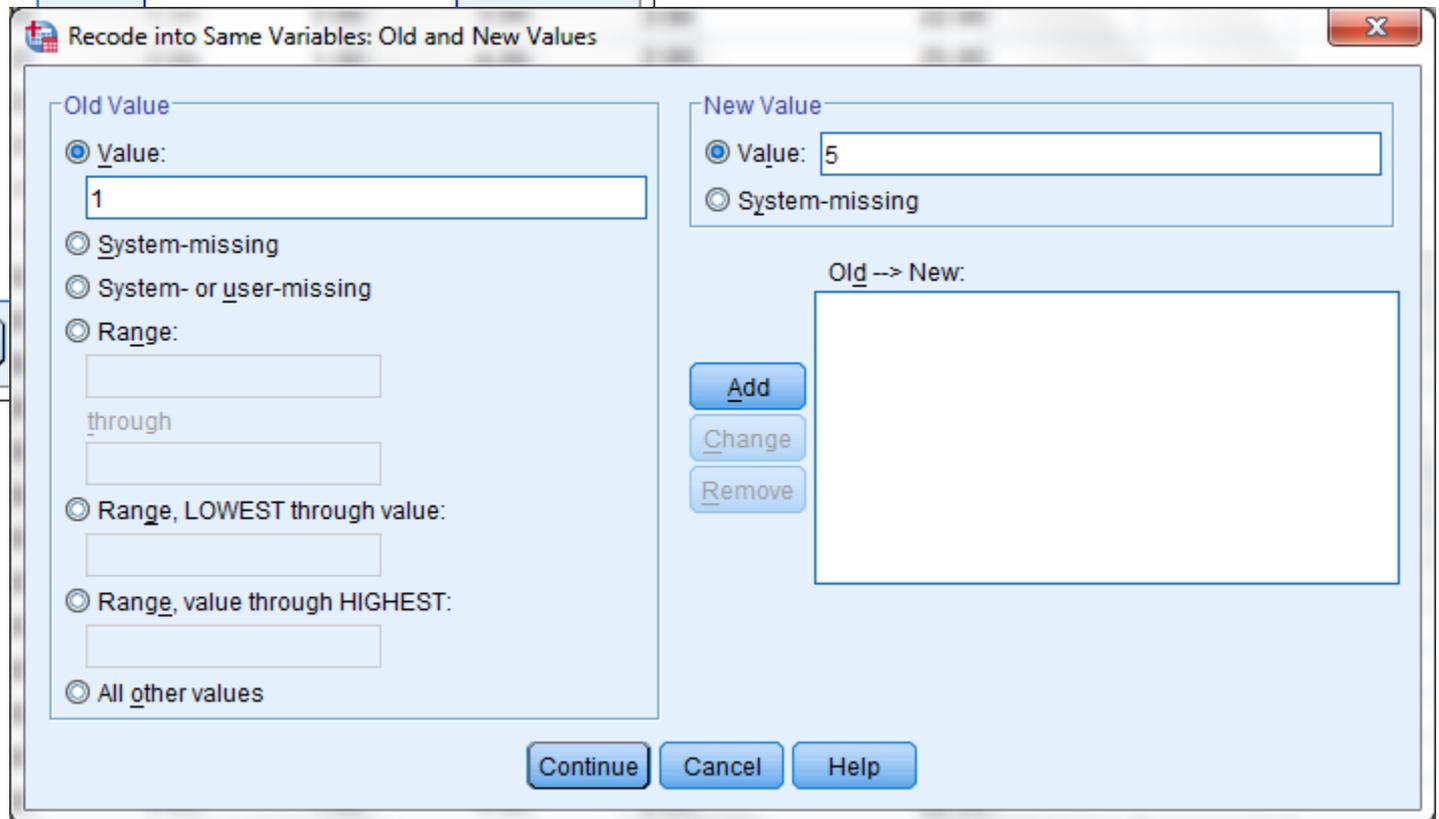
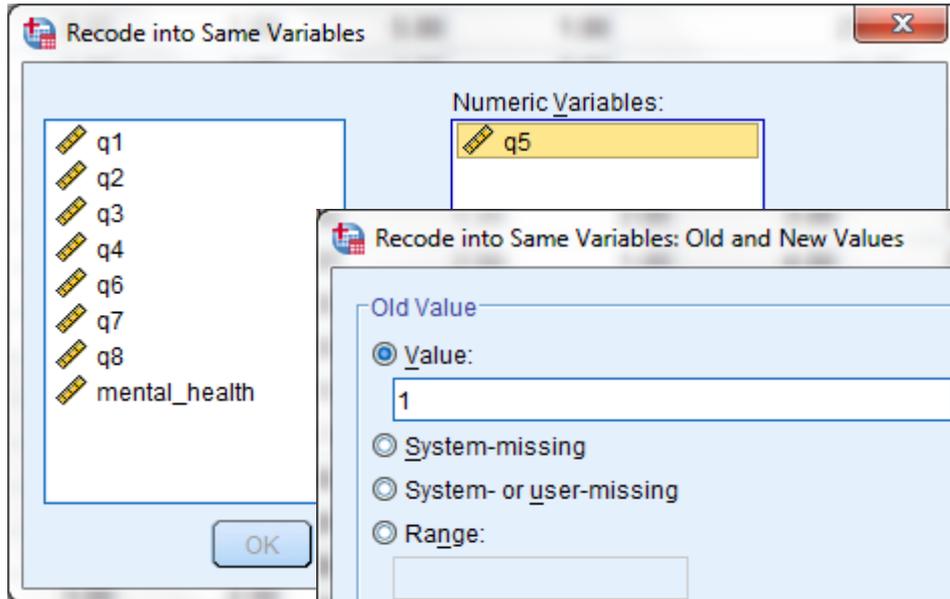
Recode into same variable



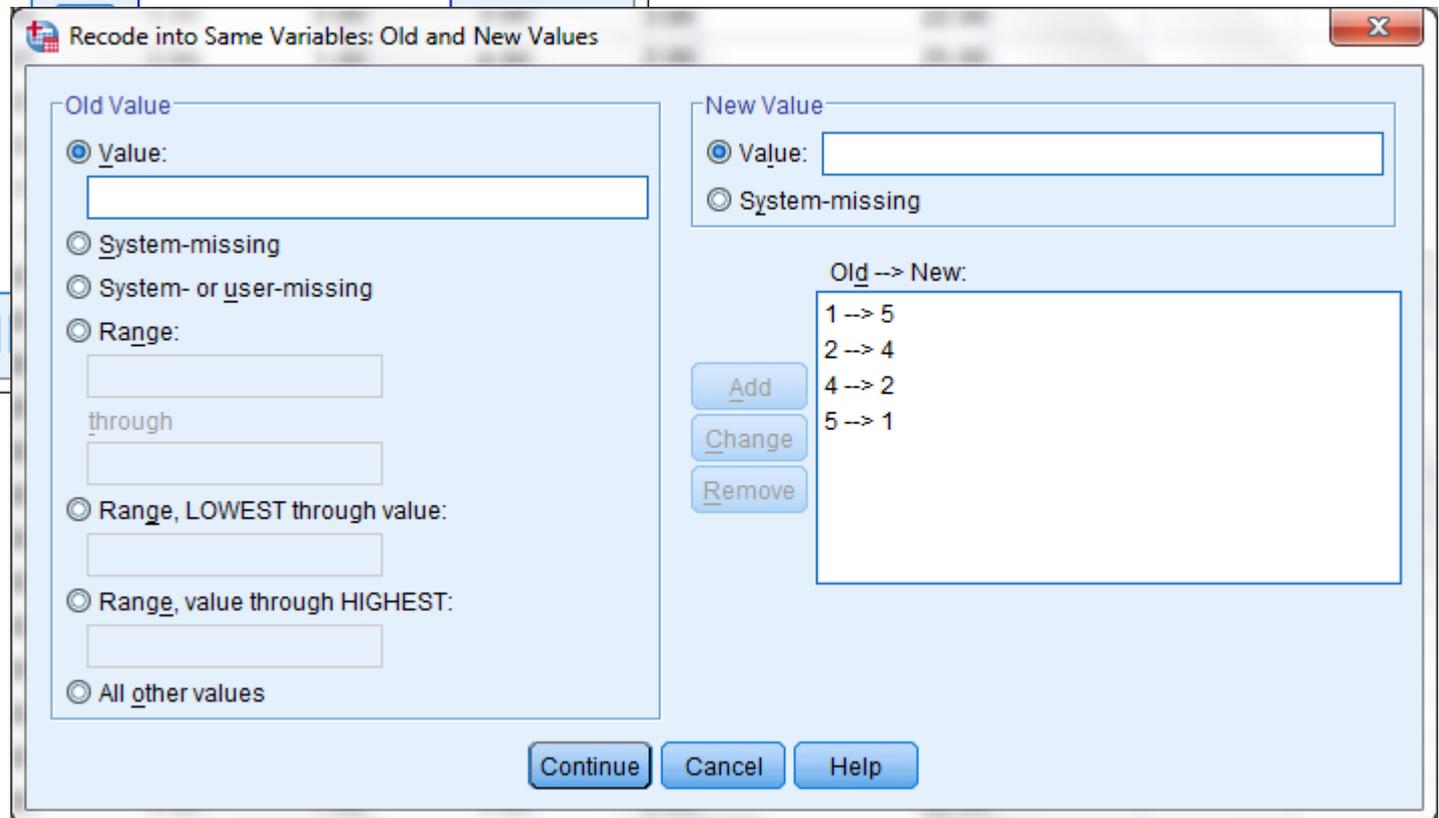
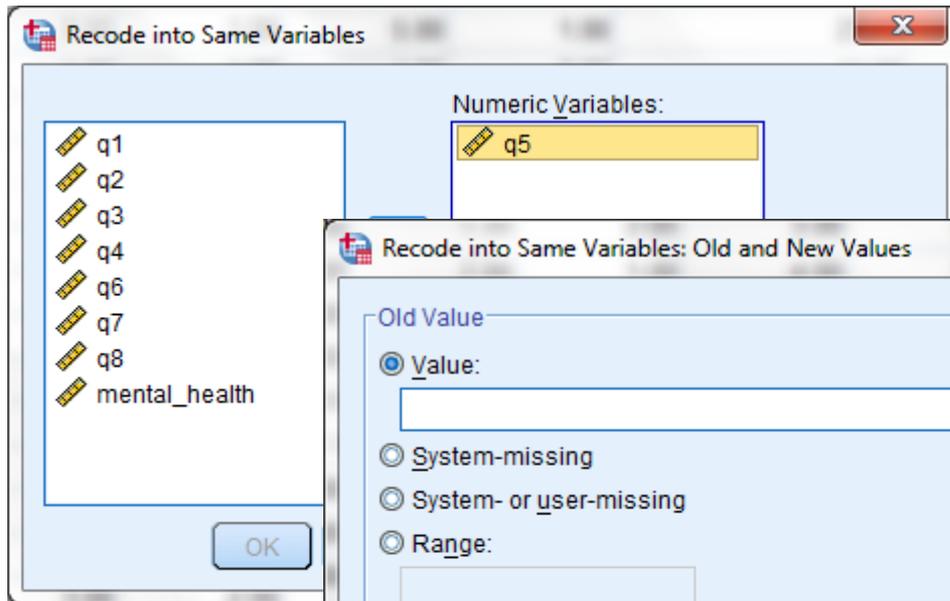
Recode into same variable



Recode into same variable



Recode into same variable

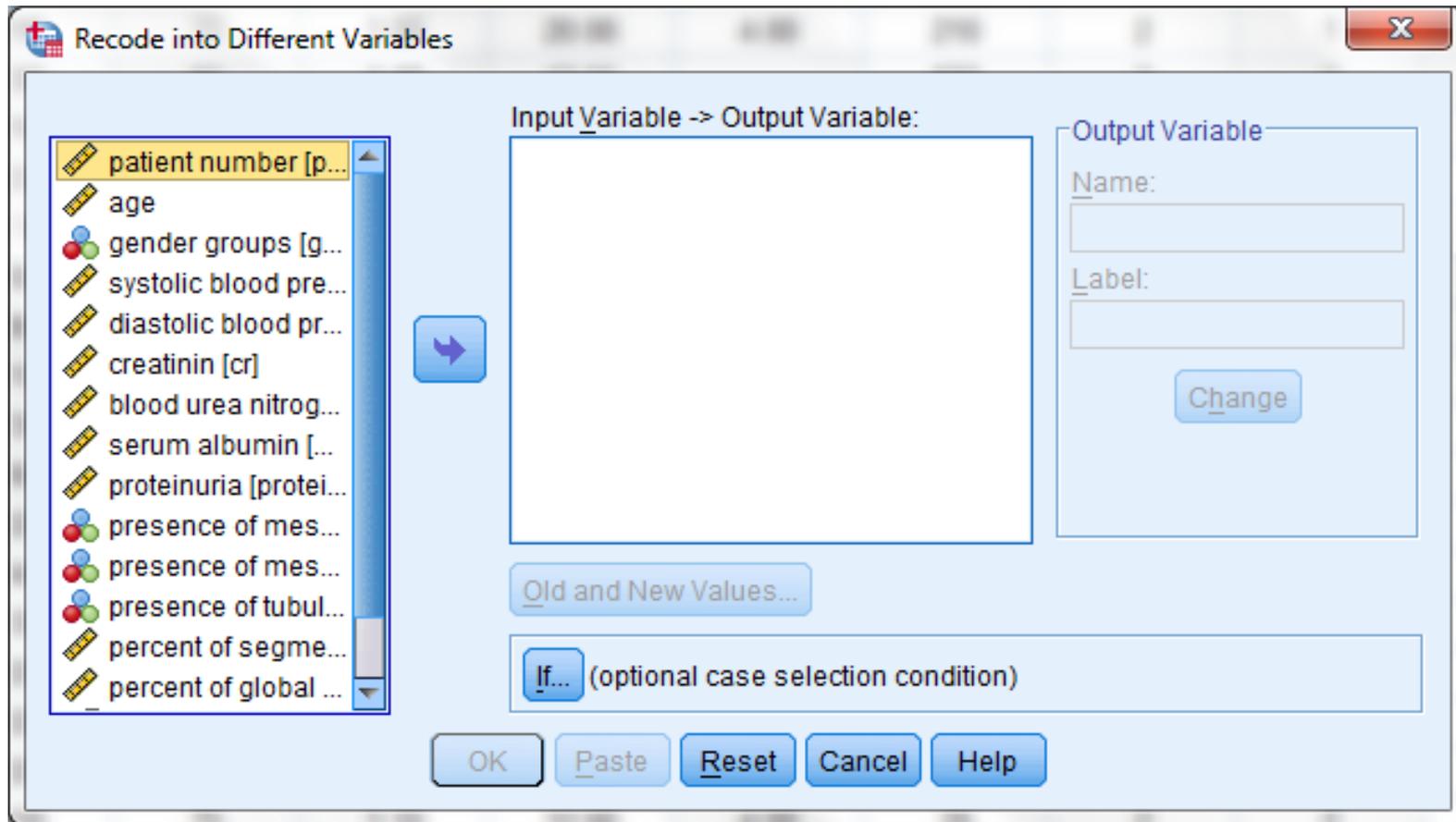


Recode into different variable

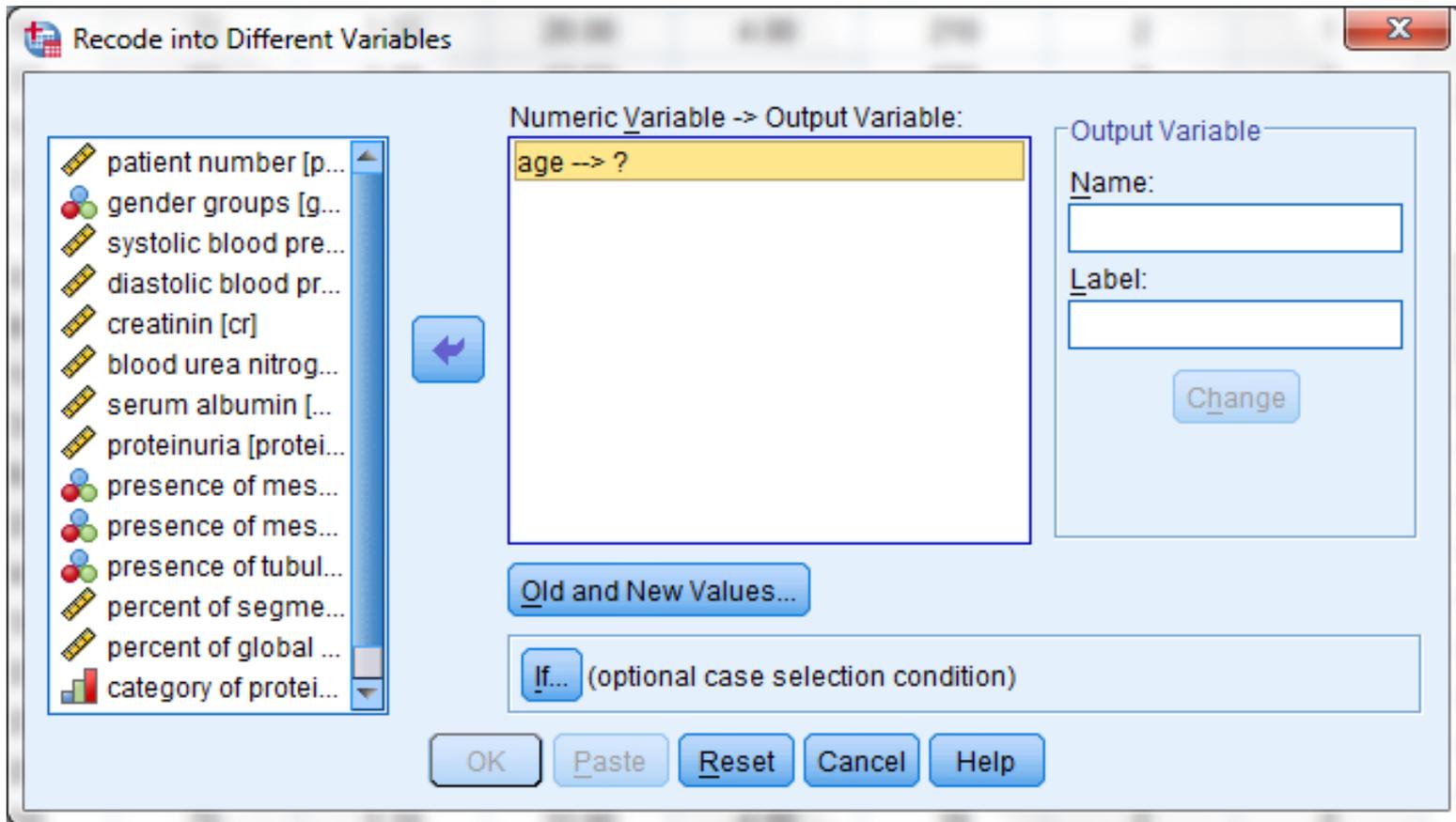
The screenshot shows the IBM SPSS Statistics Data Editor interface. The title bar indicates the file is *data3.sav [DataSet14]. The menu bar includes File, Edit, View, Data, Transform, Analyze, Direct Marketing, and Graphs. The 'Transform' menu is open, and the option 'Recode into Different Variables...' is highlighted. The data grid shows a variable named 'q1' with values ranging from 1.00 to 4.00 across 16 rows.

	q1
1	1.00
2	1.00
3	2.00
4	2.00
5	3.00
6	4.00
7	1.00
8	2.00
9	2.00
10	1.00
11	1.00
12	1.00
13	1.00
14	1.00
15	1.00
16	1.00

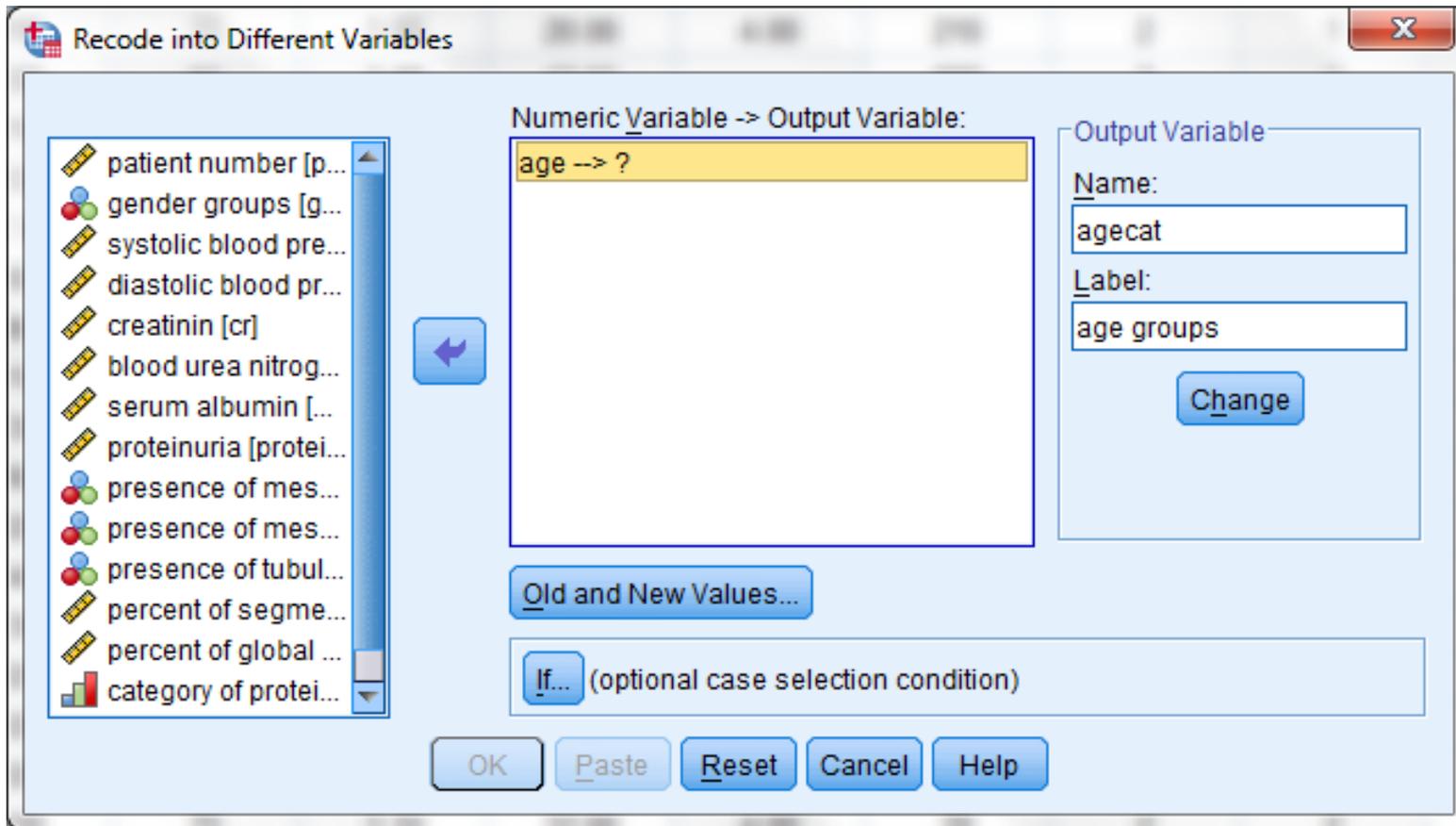
Recode into different variable



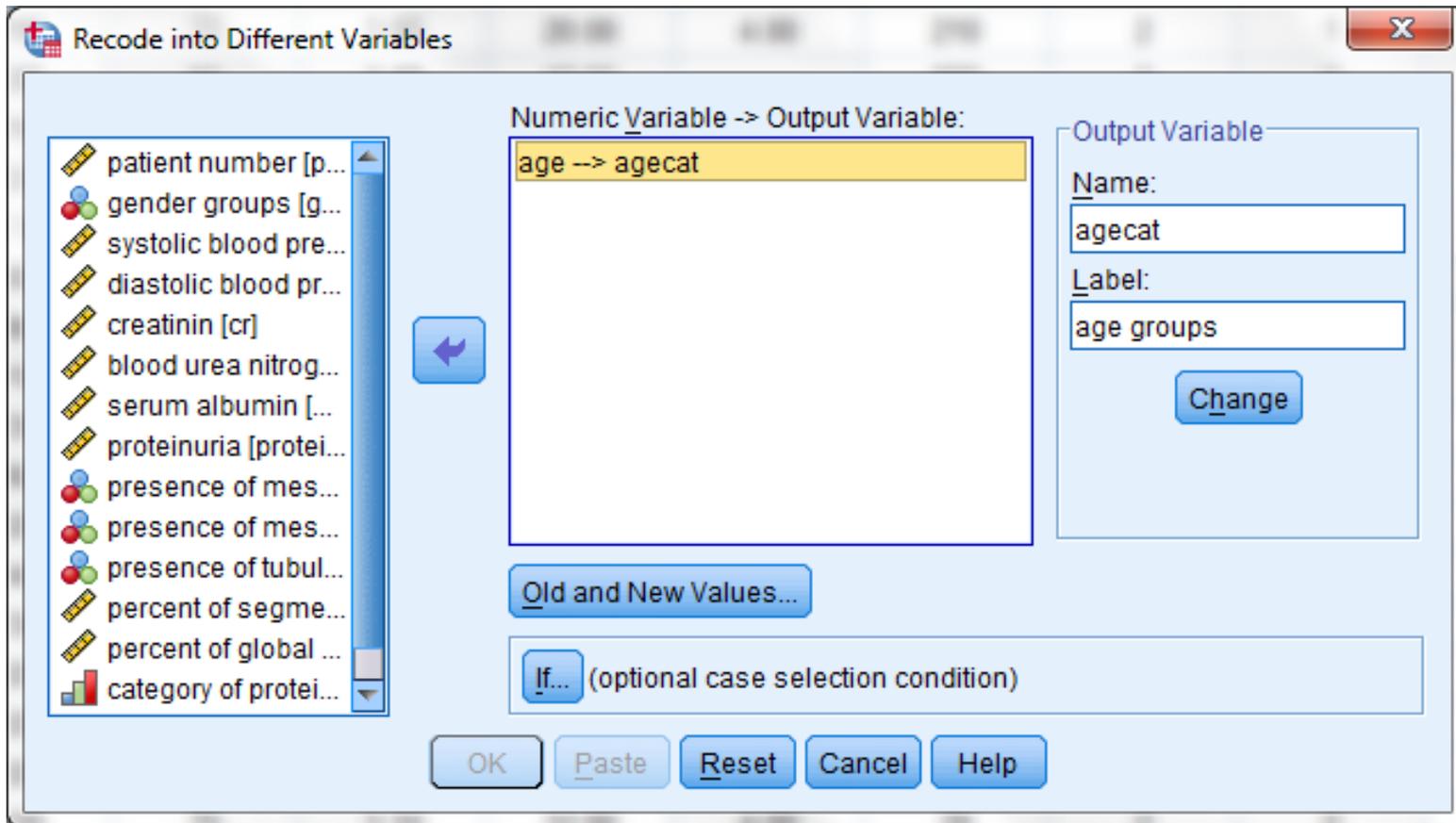
Recode into different variable



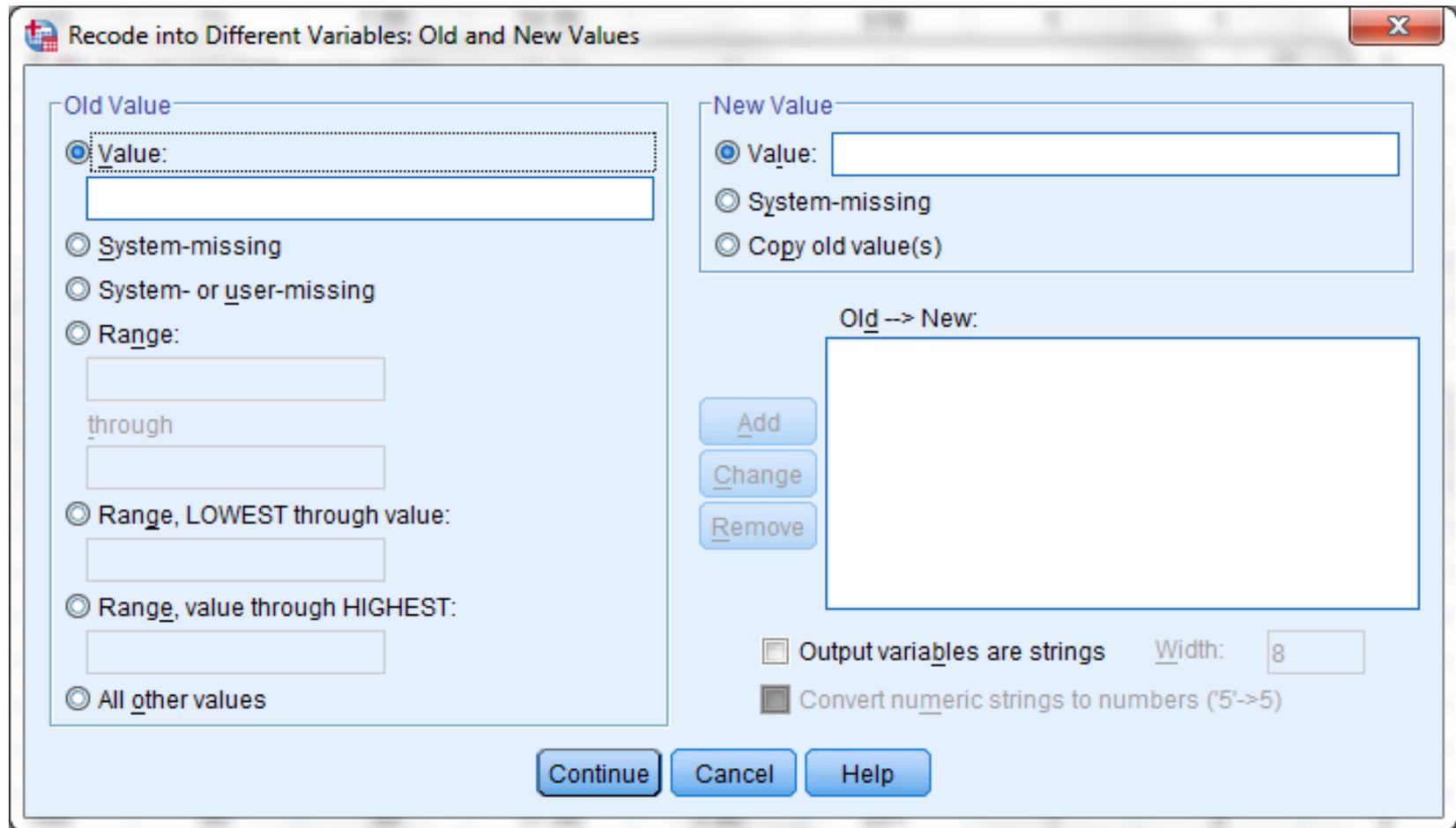
Recode into different variable



Recode into different variable



Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

- Value:
- System-missing
- System- or user-missing
- Range:

through
- Range, LOWEST through value:
- Range, value through HIGHEST:
- All other values

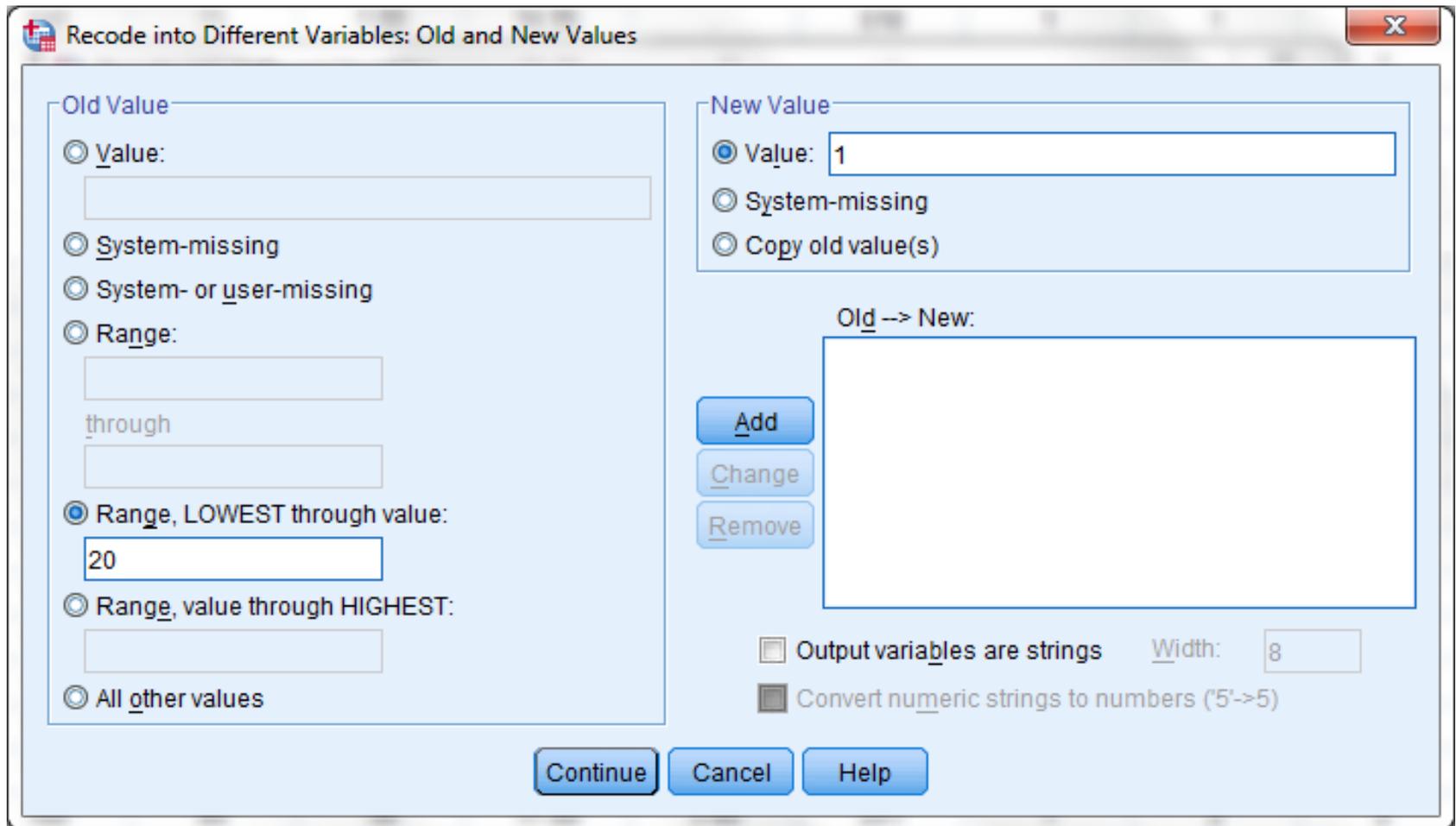
New Value

- Value:
- System-missing
- Copy old value(s)

Old --> New:

Output variables are strings Width:
 Convert numeric strings to numbers ('5'->5)

Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

- Value:
[]
- System-missing
- System- or user-missing
- Range:
[]
through
[]
- Range, LOWEST through value:
[20]
- Range, value through HIGHEST:
[]
- All other values

New Value

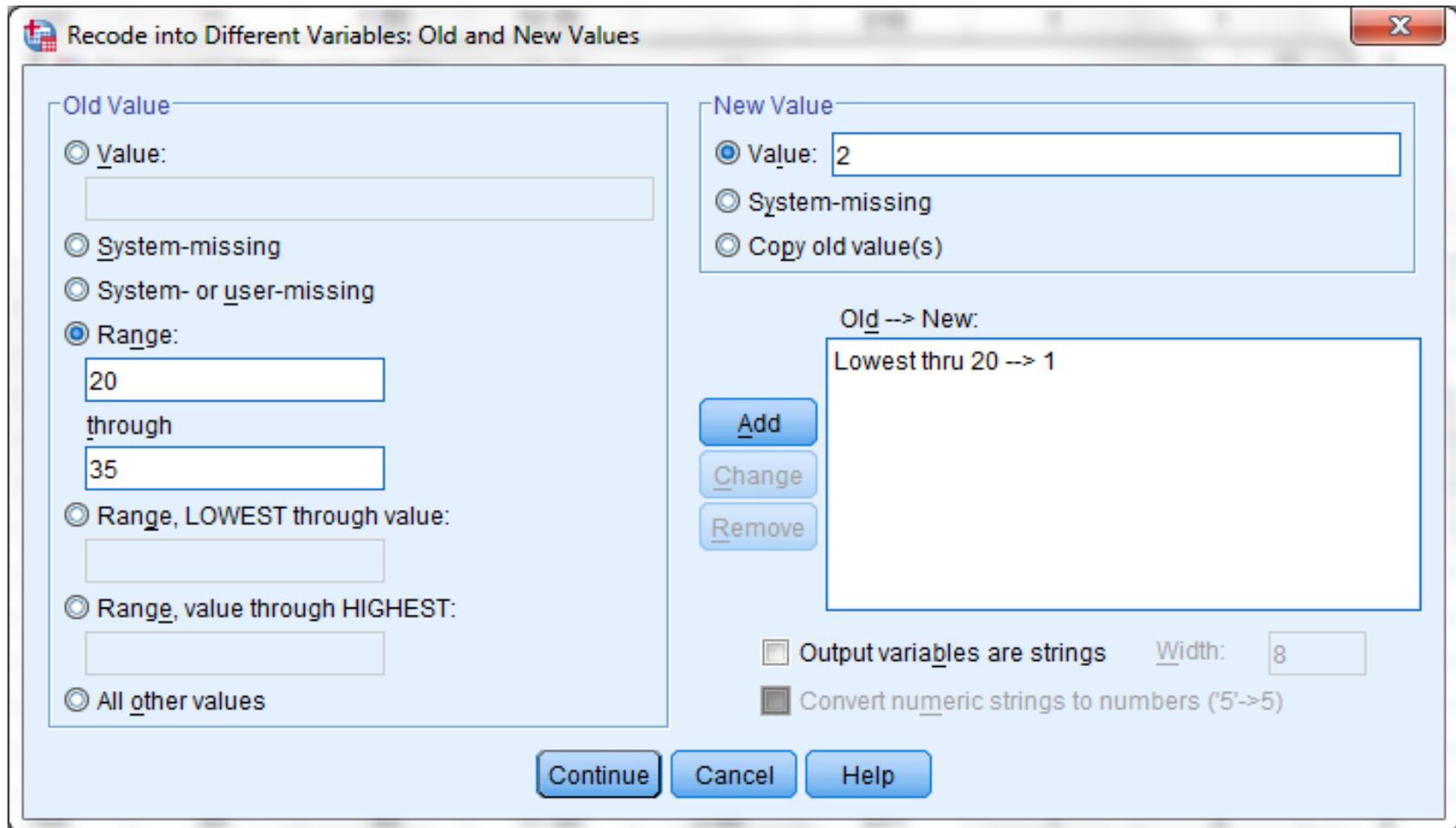
- Value: [1]
- System-missing
- Copy old value(s)

Old --> New:
[]

Output variables are strings Width: [8]

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

Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

Value:

System-missing

System- or user-missing

Range:

20

through

35

Range, LOWEST through value:

Range, value through HIGHEST:

All other values

New Value

Value: 2

System-missing

Copy old value(s)

Old --> New:

Lowest thru 20 --> 1

Add

Change

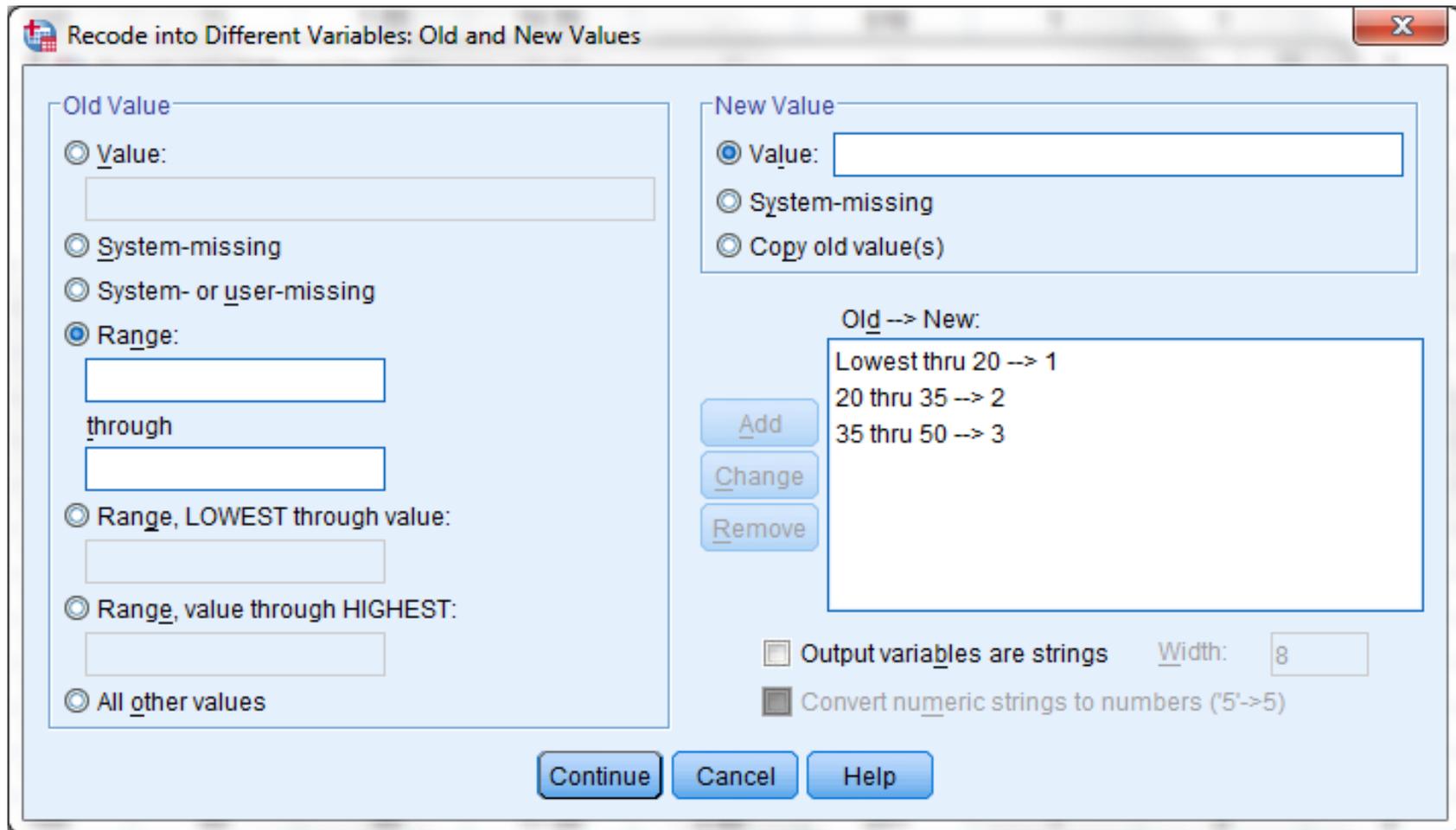
Remove

Output variables are strings Width: 8

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

Continue Cancel Help

Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

- Value:
- System-missing
- System- or user-missing
- Range:
[]
through
[]
- Range, LOWEST through value:
[]
- Range, value through HIGHEST:
[]
- All other values

New Value

- Value: []
- System-missing
- Copy old value(s)

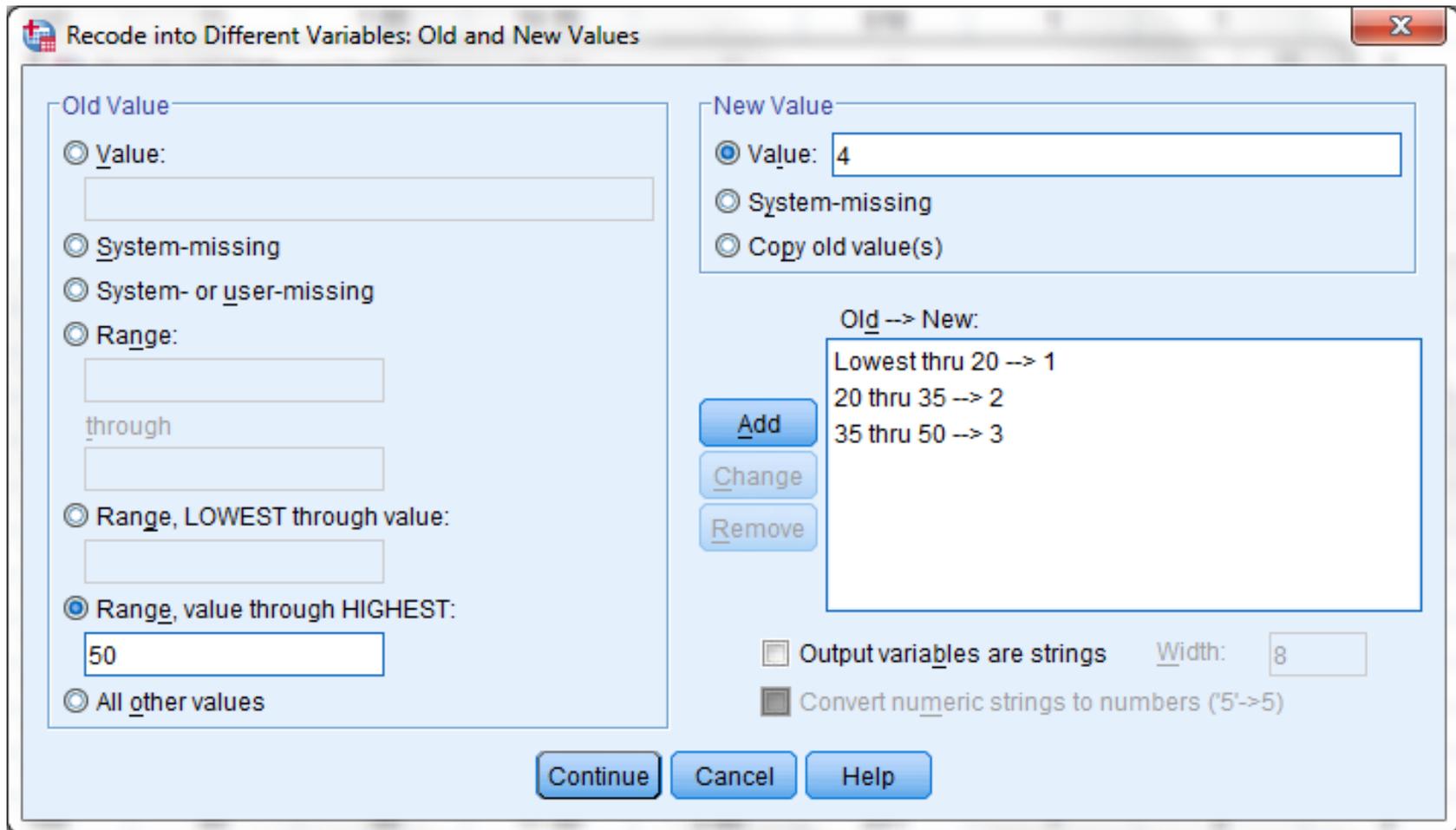
Old --> New:

```
Lowest thru 20 --> 1  
20 thru 35 --> 2  
35 thru 50 --> 3
```

Output variables are strings Width: [8]

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

Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

- Value:
- System-missing
- System- or user-missing
- Range:

through
- Range, LOWEST through value:
- Range, value through HIGHEST:
- All other values

New Value

- Value:
- System-missing
- Copy old value(s)

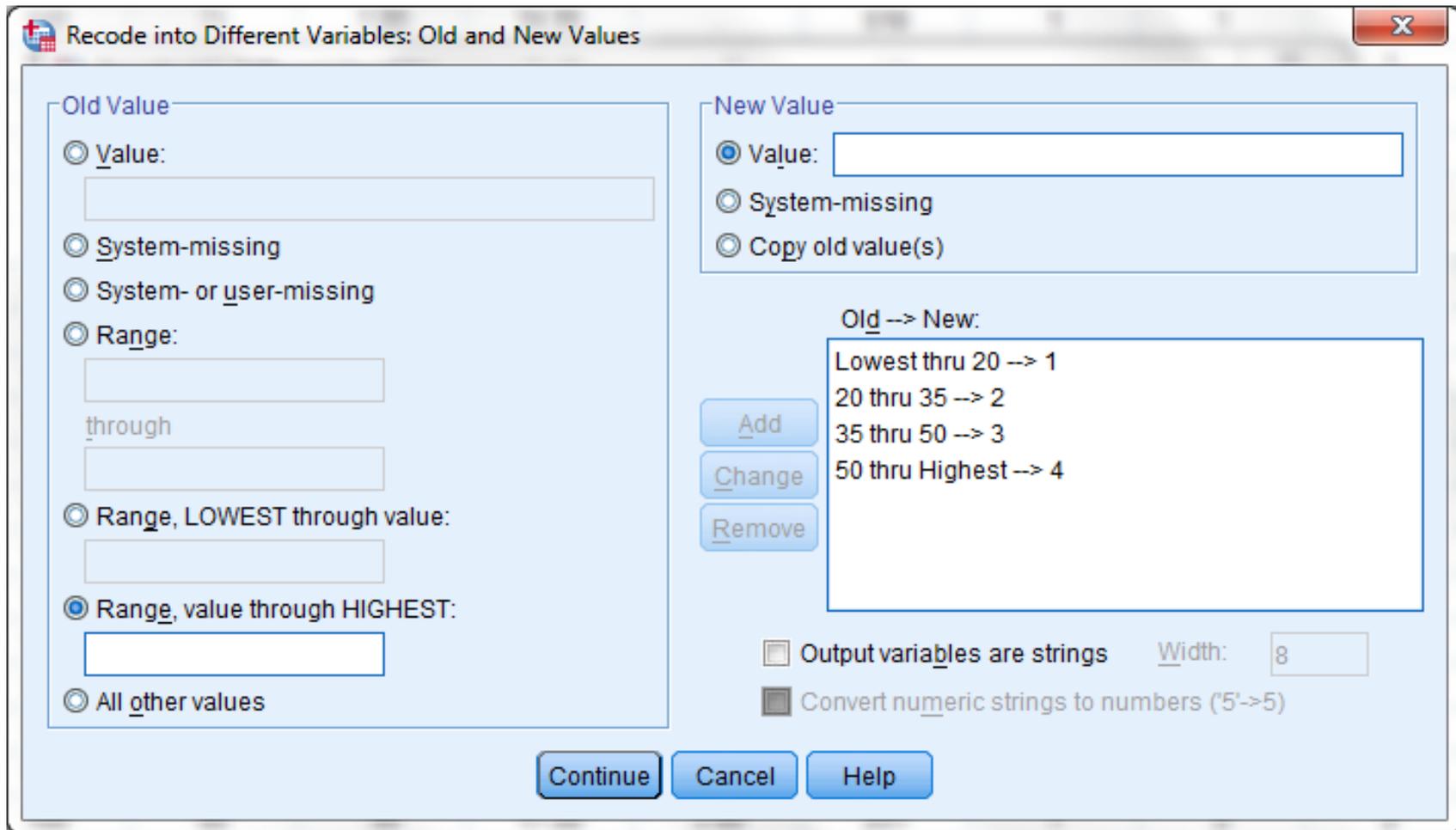
Old --> New:

Lowest thru 20 --> 1
20 thru 35 --> 2
35 thru 50 --> 3

Output variables are strings Width:

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

Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

Value:

System-missing

System- or user-missing

Range:

through

Range, LOWEST through value:

Range, value through HIGHEST:

All other values

New Value

Value:

System-missing

Copy old value(s)

Old --> New:

Lowest thru 20 --> 1

20 thru 35 --> 2

35 thru 50 --> 3

50 thru Highest --> 4

Output variables are strings Width:

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

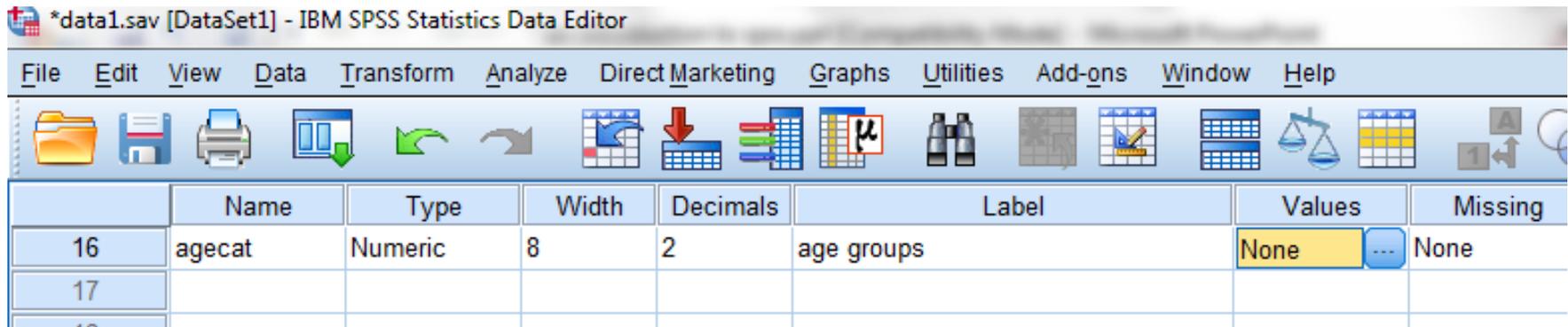
Recode into different variable

a	ss	gs	procatg	agecat	var
2	.17	.04	1.00	2.00	
2	.33	.13	2.00	2.00	
1	.30	.20	1.00	4.00	
1	.15	.35	2.00	3.00	
1	.71	.29	3.00	4.00	
1	.00	.33	1.00	1.00	
1	.00	.25	3.00	2.00	
1	.00	.00	1.00	2.00	
1	.11	.11	3.00	2.00	
1	.10	.00	2.00	2.00	
1	.25	.00	2.00	3.00	
1	.25	.25	3.00	4.00	
1	.20	.30	1.00	3.00	
2	.63	.06	2.00	4.00	
1	.53	.47	3.00	4.00	
1	.48	.29	3.00	2.00	
1	.40	.00	2.00	2.00	
1	.07	.07	1.00	2.00	
2	.00	.00	1.00	3.00	
2	.30	.30	2.00	3.00	
1	.40	.24	2.00	2.00	
2	.50	.00	2.00	2.00	
1	.09	.14	2.00	2.00	

Recode into different variable

*data1.sav [DataSet1] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help



The screenshot shows the IBM SPSS Statistics Data Editor interface. The main window displays the Variable View for the variable 'agecat'. The table below represents the data shown in the interface.

	Name	Type	Width	Decimals	Label	Values	Missing
16	agecat	Numeric	8	2	age groups	None	None
17							
18							

Value Labels

Value Labels

Value:

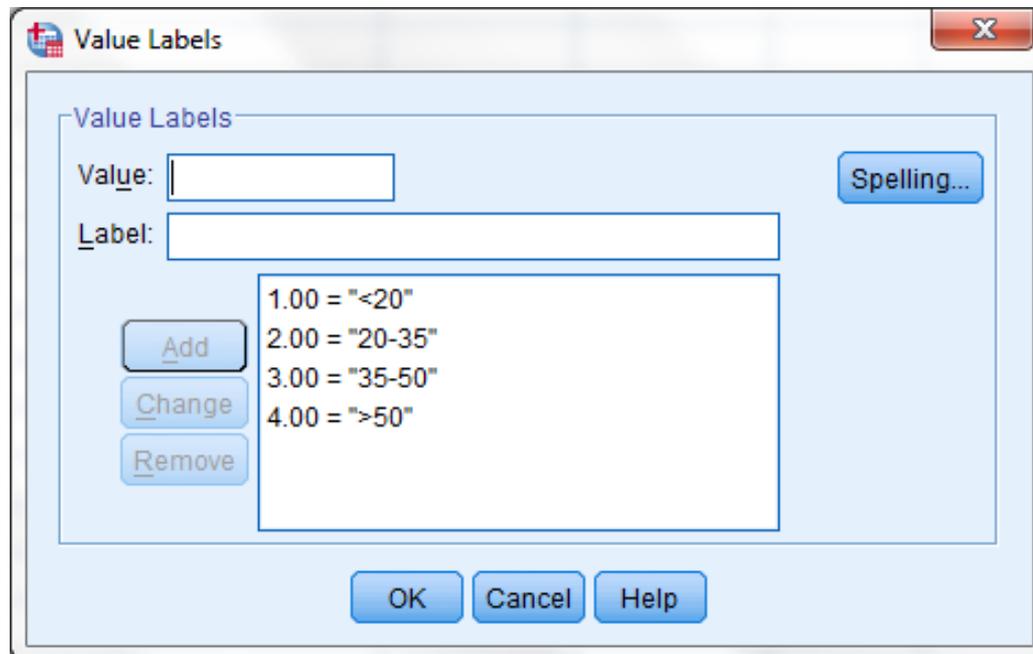
Label:

Add Change Remove

1.00 = "<20"
2.00 = "20-35"
3.00 = "35-50"
4.00 = ">50"

Spelling...

OK Cancel Help



The screenshot shows the 'Value Labels' dialog box in IBM SPSS Statistics. The dialog box has a title bar with the SPSS logo and the text 'Value Labels'. Inside the dialog, there is a section titled 'Value Labels' with two input fields: 'Value:' and 'Label:'. To the right of the 'Value:' field is a 'Spelling...' button. Below the input fields are three buttons: 'Add', 'Change', and 'Remove'. A list box contains the following entries: '1.00 = "<20"', '2.00 = "20-35"', '3.00 = "35-50"', and '4.00 = ">50"'. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Recode into different variable

*data2.sav [DataSet13] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

1 : Educational.level 1

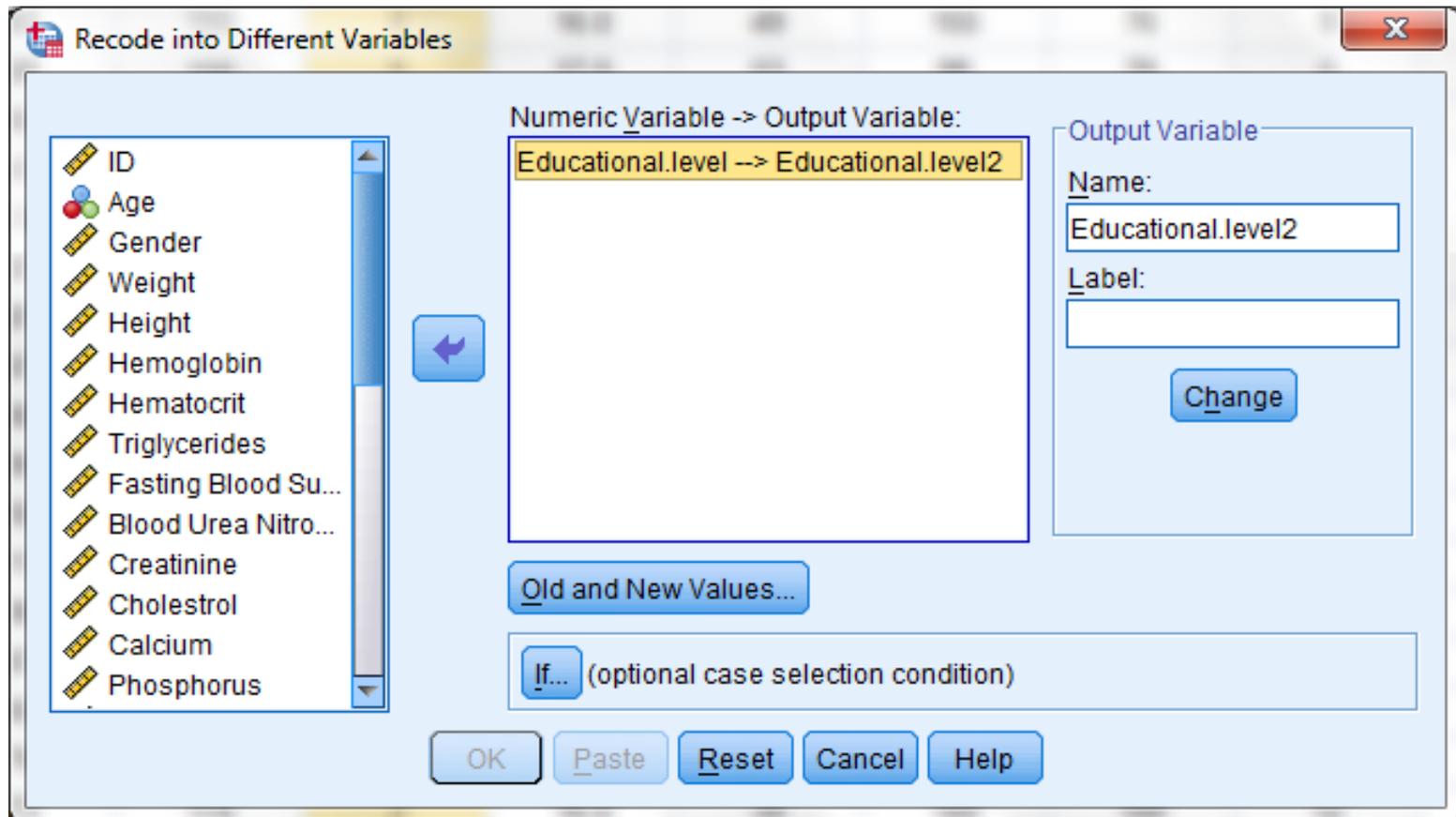
	ID	Age	Gender	Weight	Height	Educational.l evel	Hemoglobin
1	1	60	1	65	165	1	17.0
2	2	79	2	67	150	1	16.0
3	3	82	1	88	156	1	17.0
4	4	66	2	65	176	1	16.5
5	5	52	1	43	157	1	16.5
6	6	58	2	56	165	1	14.5
7	7	50	1	57	163	1	15.3

Recode into different variable

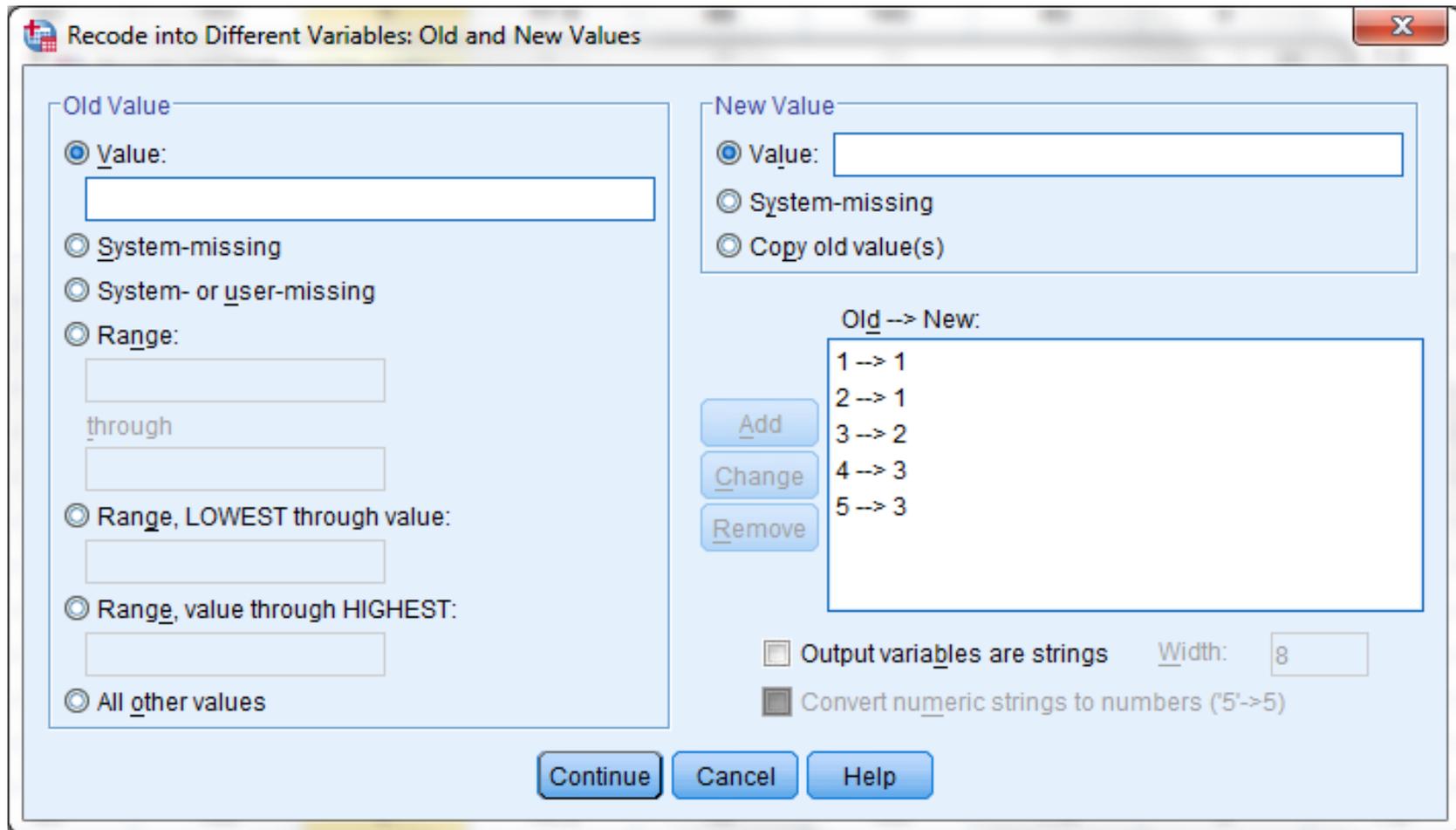
The screenshot shows the IBM SPSS Statistics Data Editor interface. The main window title is "*data2.sav [DataSet13] - IBM SPSS Statistics Data Editor". The menu bar includes File, Edit, View, Data, Transform, Analyze, Direct Marketing, Graphs, Utilities, Add-ons, Window, and Help. The toolbar contains various icons for file operations and data analysis. A "Value Labels" dialog box is open in the foreground, displaying a list of value labels for the variable "Educational Level". The list includes: 1 = "Under Diploma", 2 = "Diploma", 3 = "BS", 4 = "MS", and 5 = "Ph.D". The dialog box has buttons for "Add", "Change", "Remove", "Spelling...", "OK", "Cancel", and "Help". In the background, a data table is visible with two columns: "Educational Level" and "Hemoglobin". The table contains seven rows of data, with the first column highlighted in yellow.

Educational Level	Hemoglobin
1	17.0
1	16.0
1	17.0
1	16.5
1	16.5
1	14.5
1	15.3

Recode into different variable



Recode into different variable



Recode into Different Variables: Old and New Values

Old Value

Value:

System-missing

System- or user-missing

Range:

through

Range, LOWEST through value:

Range, value through HIGHEST:

All other values

New Value

Value:

System-missing

Copy old value(s)

Old -> New:

1 -> 1
2 -> 1
3 -> 2
4 -> 3
5 -> 3

Output variables are strings Width:

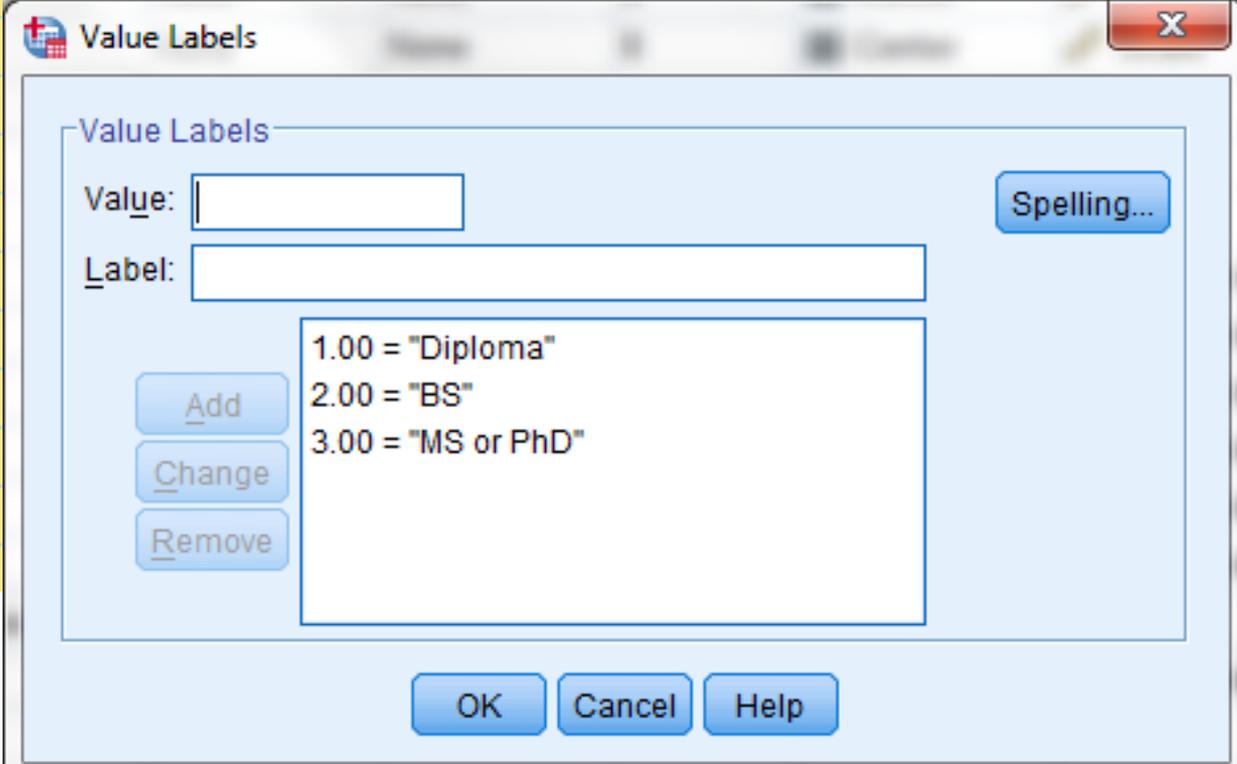
Convert numeric strings to numbers ('5'->5)

Recode into different variable

BMI	Educational.level2	v
23.88	1.00	
29.78	1.00	
36.16	1.00	
20.98	1.00	
17.44	1.00	
20.57	1.00	
21.45	1.00	
26.85	3.00	
20.91	1.00	
21.95	1.00	
25.20	3.00	
30.86	1.00	

Recode into different variable

BMI	Educational.level2
23.88	1.00
29.78	1.00
36.16	
20.98	
17.44	
20.57	
21.45	
26.85	
20.91	
21.95	
25.20	
30.86	



The dialog box is titled "Value Labels" and contains the following elements:

- Value Labels:** A section header.
- Value:** An empty text input field.
- Label:** An empty text input field.
- Spelling...:** A button located to the right of the input fields.
- Buttons:** "Add", "Change", and "Remove" buttons are located on the left side of the list area.
- List:** A list box containing the following entries:
 - 1.00 = "Diploma"
 - 2.00 = "BS"
 - 3.00 = "MS or PhD"
- Bottom Buttons:** "OK", "Cancel", and "Help" buttons are located at the bottom of the dialog.

تحليل توصيفي داده ها

Analyze •

Descriptive Statistics –

Frequencies •

Descriptives •

Explore •

تحليل توصيفي داده ها

*data2.sav [DataSet13] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Win

Reports
Descriptive Statistics
Tables
Compare Means
General Linear Model
Generalized Linear Models
Mixed Models
Correlate
Regression
Loglinear
Neural Networks
Classify
Dimension Reduction
Scale
Nonparametric Tests
Forecasting
Survival
Multiple Response

123 Frequencies...
Descriptives...
Explore...
Crosstabs...
Ratio...
P-P Plots...
Q-Q Plots...

	ID	Age
1	1	60
2	2	79
3	3	82
4	4	66
5	5	52
6	6	58
7	7	50
8	8	83
9	9	46
10	10	54
11	11	67
12	12	54
13	13	63
14	14	44

157	1	
165	1	
163	1	
180	5	
179	2	
176	2	
189	5	
180	2	
190	2	
180	5	

Frequencies

*data2.sav [DataSet13] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Win

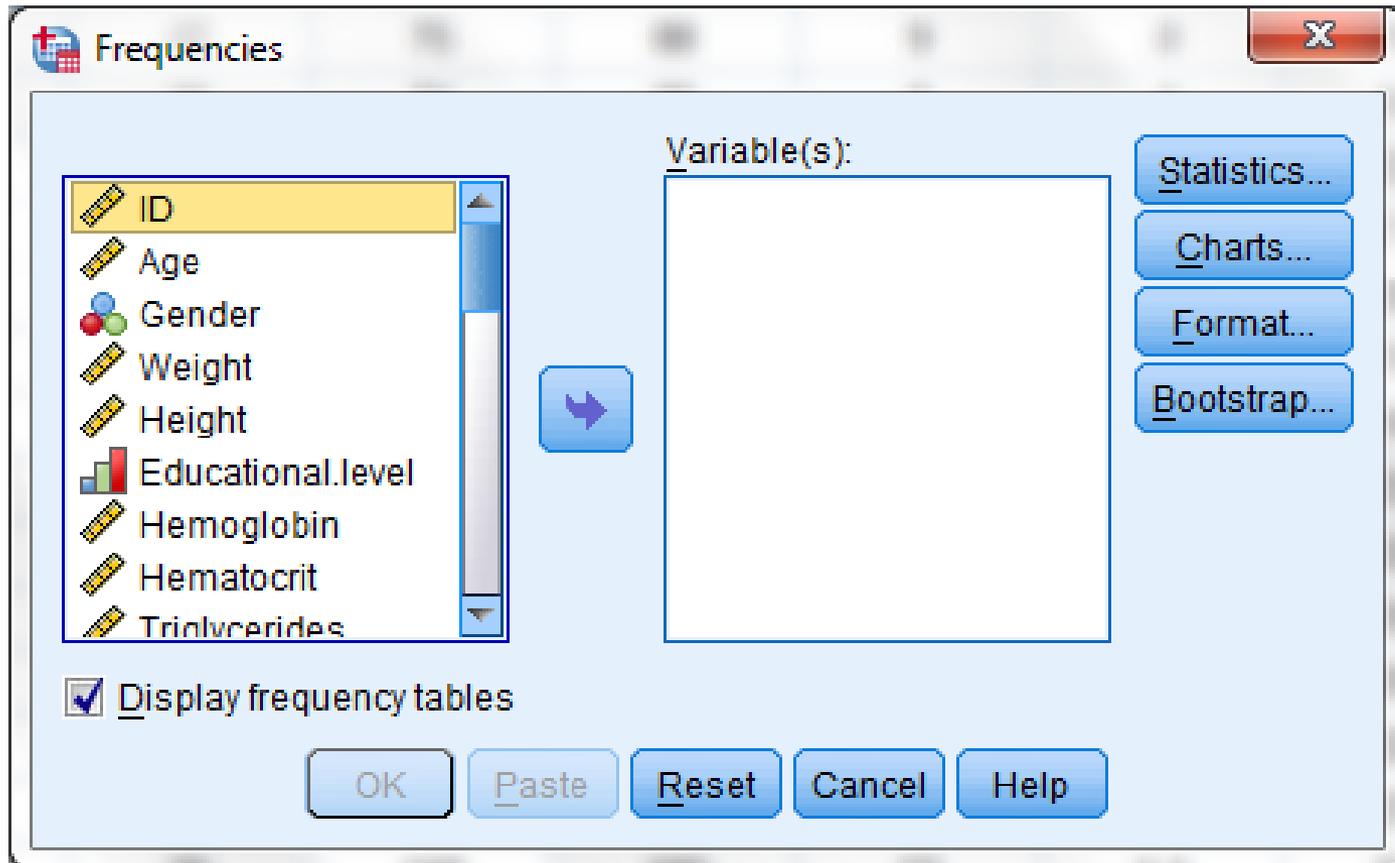
Reports
Descriptive Statistics
 Tables
 Compare Means
 General Linear Model
 Generalized Linear Models
 Mixed Models
 Correlate
 Regression
 Loglinear
 Neural Networks
 Classify
 Dimension Reduction
 Scale
 Nonparametric Tests
 Forecasting
 Survival
 Multiple Response

123 Frequencies...
 Descriptives...
 Explore...
 Crosstabs...
 Ratio...
 P-P Plots...
 Q-Q Plots...

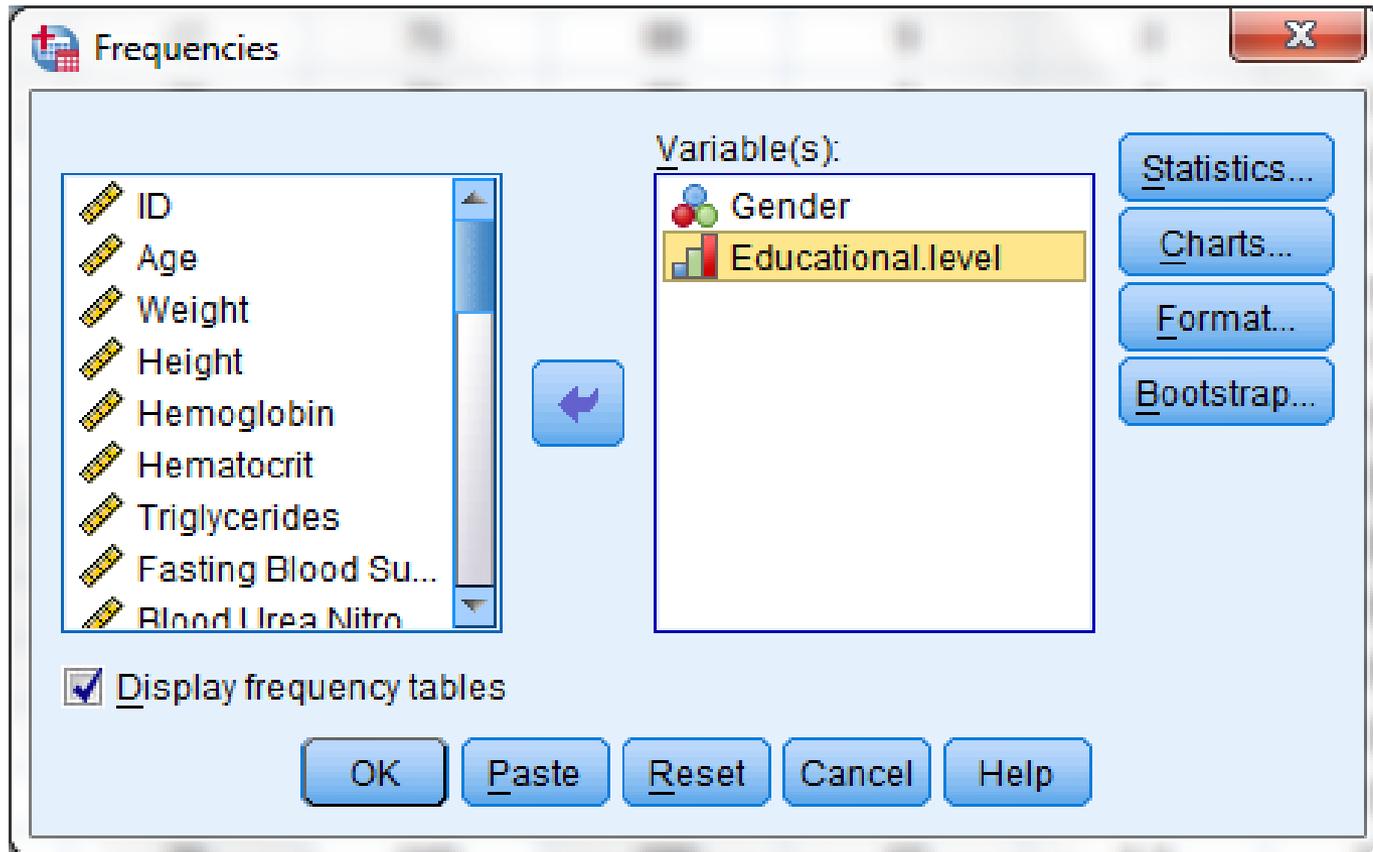
	ID	Age
1	1	60
2	2	79
3	3	82
4	4	66
5	5	52
6	6	58
7	7	50
8	8	83
9	9	46
10	10	54
11	11	67
12	12	54
13	13	63
14	14	44

157	1	
165	1	
163	1	
180	5	
179	2	
176	2	
189	5	
180	2	
190	2	
180	5	

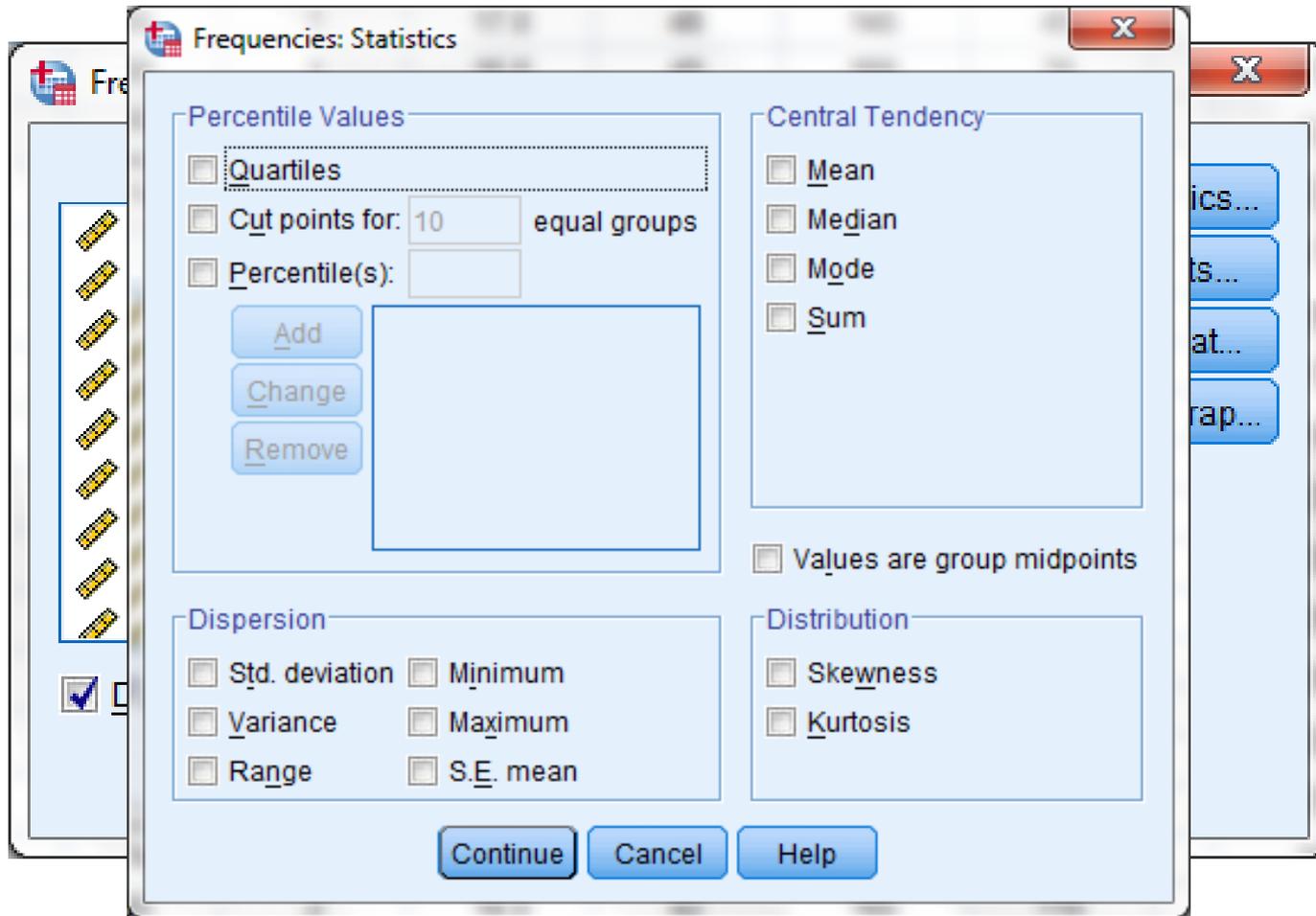
Frequencies



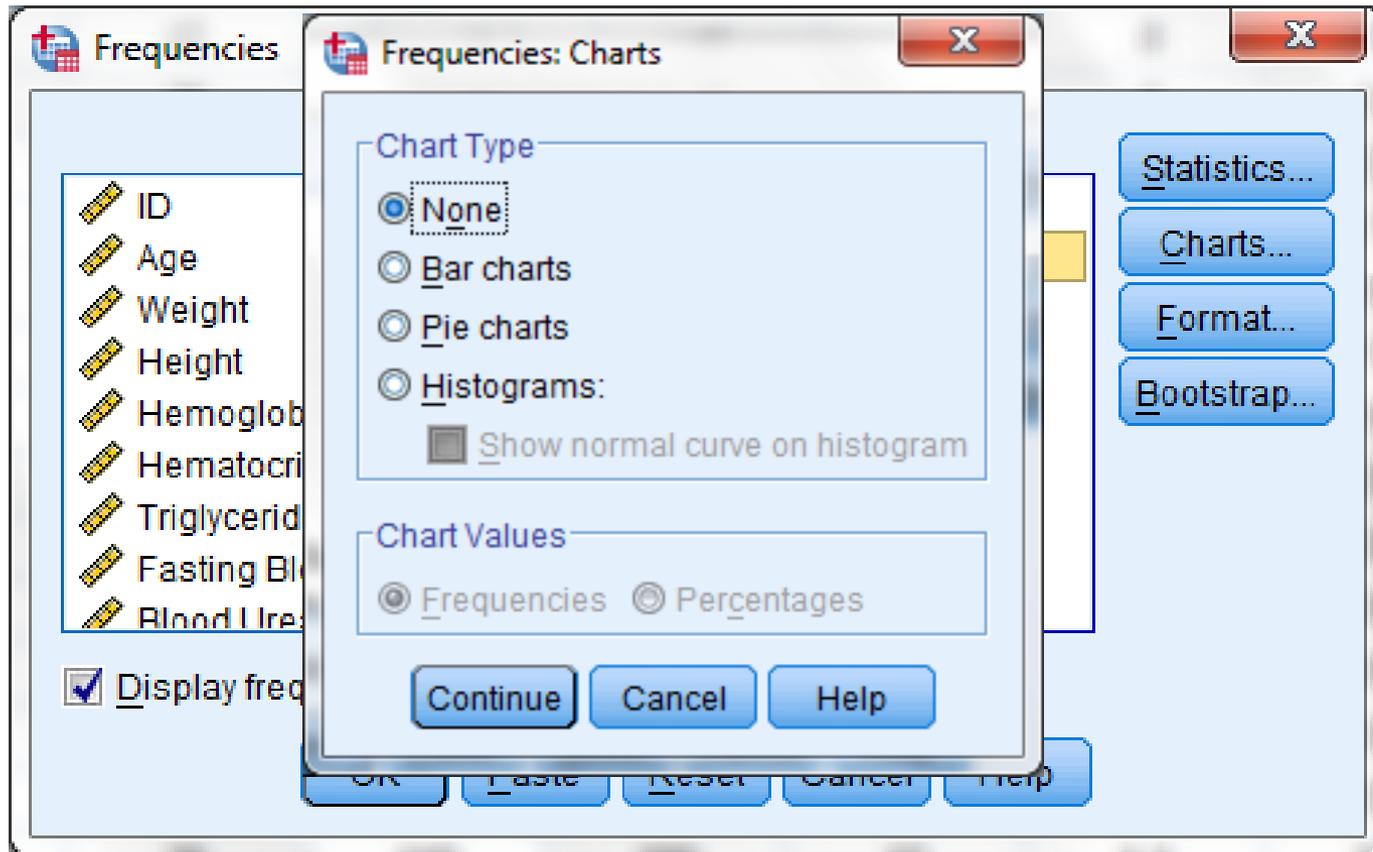
Frequencies



Frequencies



Frequencies



Frequencies

Frequency Table

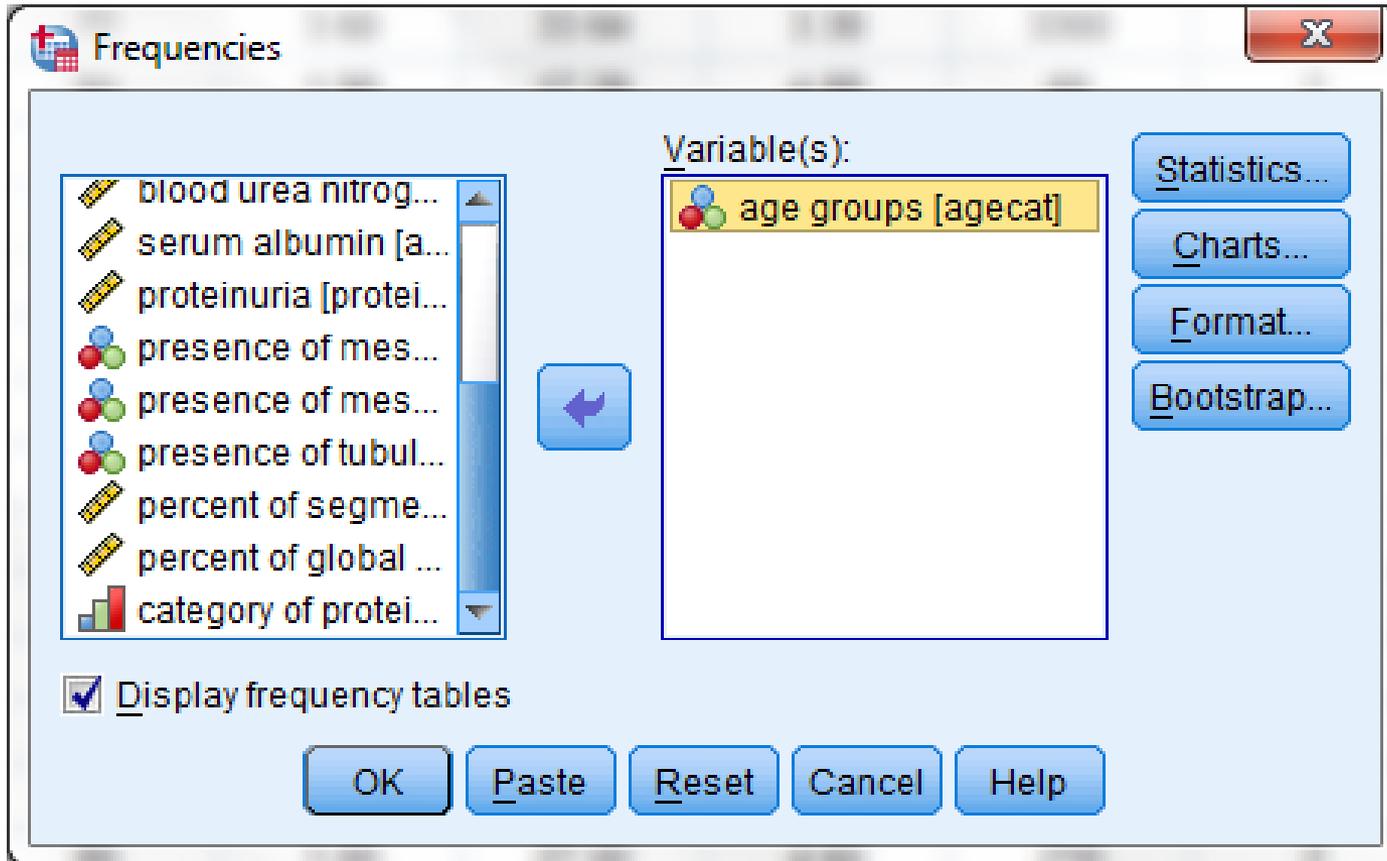
Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	35	50.0	50.0	50.0
	Female	35	50.0	50.0	100.0
	Total	70	100.0	100.0	

Educational.level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under Diploma	22	31.4	31.4	31.4
	Diploma	19	27.1	27.1	58.6
	BS	15	21.4	21.4	80.0
	MS	7	10.0	10.0	90.0
	Ph.D	7	10.0	10.0	100.0
	Total	70	100.0	100.0	

Frequencies



data1 •

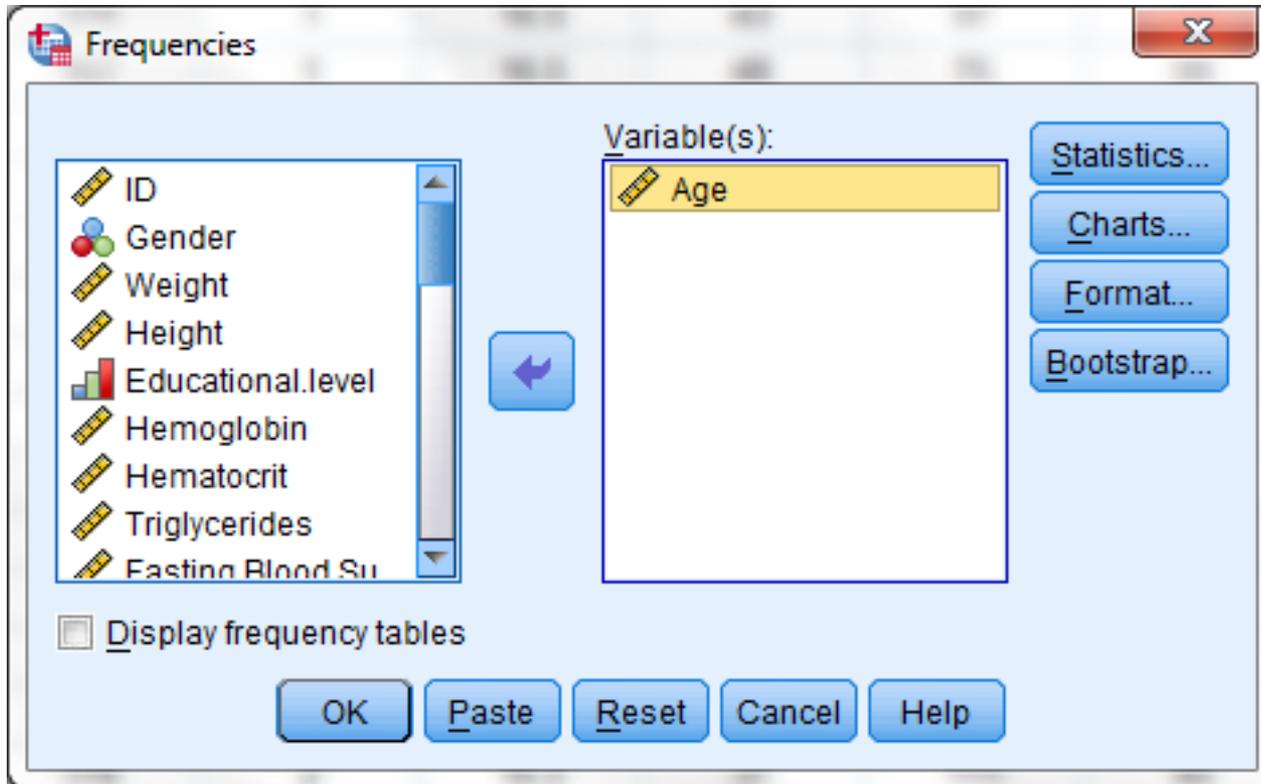
Frequencies

Valid Percent •

age groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<20	7	13.7	14.0	14.0
	20-35	23	45.1	46.0	60.0
	35-50	11	21.6	22.0	82.0
	>50	9	17.6	18.0	100.0
	Total	50	98.0	100.0	
Missing	System	1	2.0		
Total		51	100.0		

Frequencies



- متغیر کمی
data2

Frequencies

Frequencies: Statistics

Percentile Values

- Quartiles
- Cut points for: 10 equal groups
- Percentile(s):

Central Tendency

- Mean
- Median
- Mode
- Sum

Values are group midpoints

Dispersion

- Std. deviation
- Variance
- Range
- Minimum
- Maximum
- S.E. mean

Distribution

- Skewness
- Kurtosis

- متغیر کمی
data2

Frequencies

Statistics

Age

N	Valid	70
	Missing	0
Mean		59.53
Std. Error of Mean		1.481
Median		59.00
Mode		55
Std. Deviation		12.394
Variance		153.615
Range		51
Minimum		32
Maximum		83
Sum		4167
Percentiles	25	52.00
	50	59.00
	75	68.50

• متغیر کمی

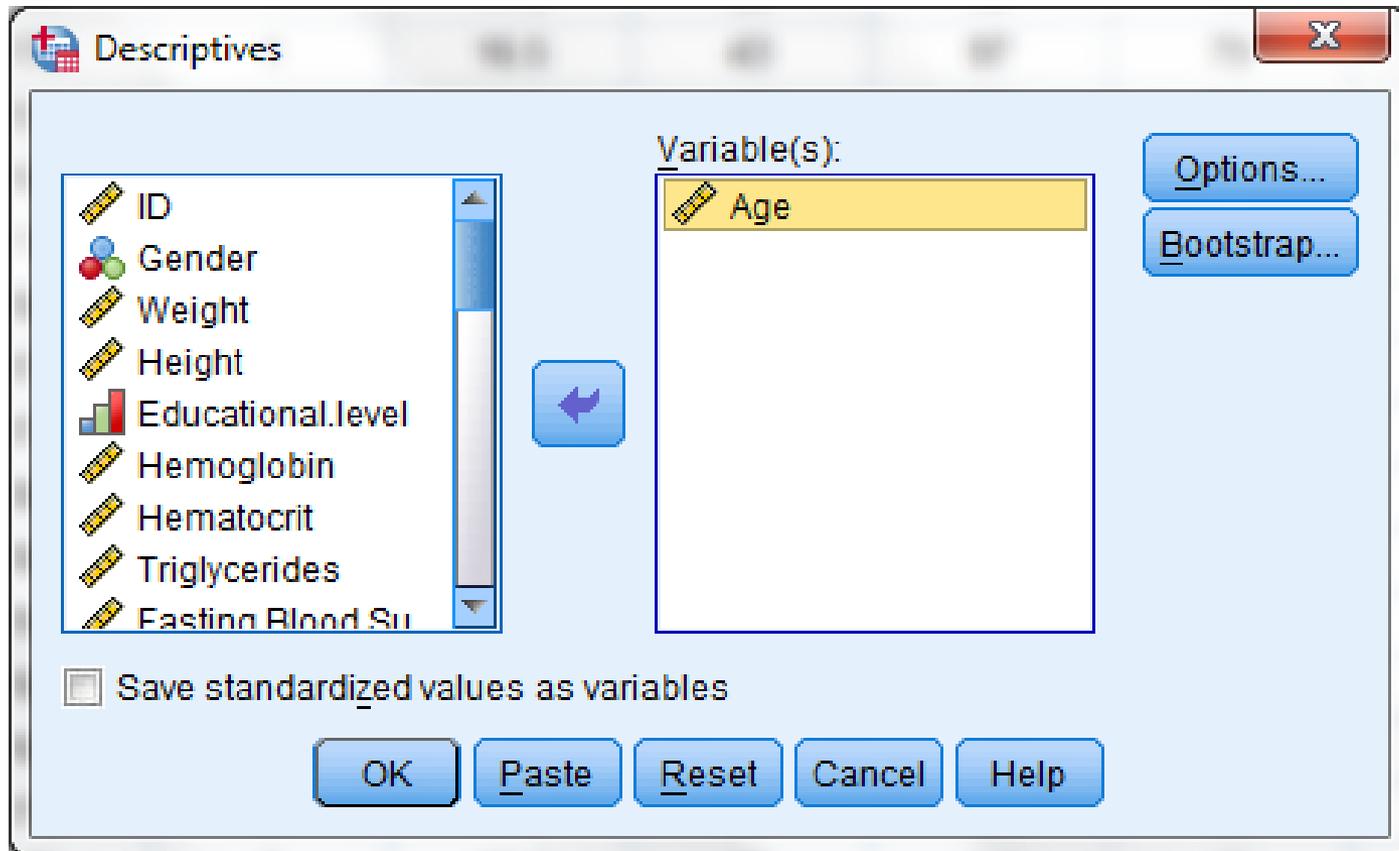
data2

Descriptives

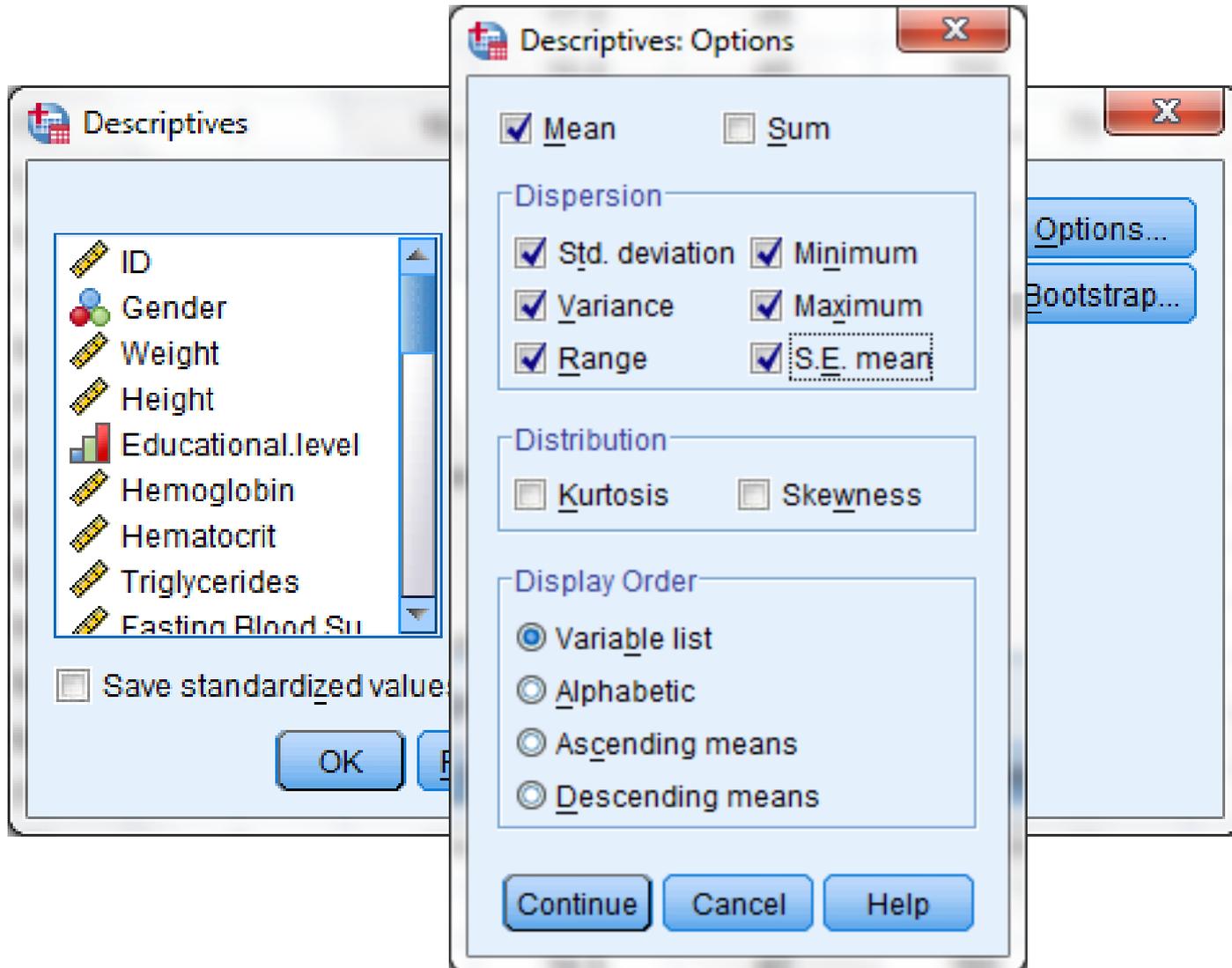
The screenshot shows the IBM SPSS Statistics Data Editor interface. The title bar reads '*data2.sav [DataSet13] - IBM SPSS Statistics Data Editor'. The menu bar includes File, Edit, View, Data, Transform, Analyze, Direct Marketing, Graphs, Utilities, Add-ons, and Windows. The toolbar contains icons for folder, save, print, and a green arrow. The main data grid has columns for ID and Age, with rows numbered 1 to 14. The 'Analyze' menu is open, showing options like Reports, Descriptive Statistics, Tables, Compare Means, General Linear Model, Generalized Linear Models, Mixed Models, Correlate, Regression, Loglinear, Neural Networks, Classify, Dimension Reduction, Scale, Nonparametric Tests, Forecasting, Survival, and Multiple Response. The 'Descriptive Statistics' option is highlighted, and its sub-menu is open, showing options like Frequencies..., Descriptives..., Explore..., Crosstabs..., Ratio..., P-P Plots..., and Q-Q Plots... The 'Descriptives...' option is highlighted in the sub-menu.

	ID	Age
1	1	60
2	2	79
3	3	82
4	4	66
5	5	52
6	6	58
7	7	50
8	8	83
9	9	46
10	10	54
11	11	67
12	12	54
13	13	63
14	14	44

Descriptives



Descriptives



Descriptives

Descriptive Statistics

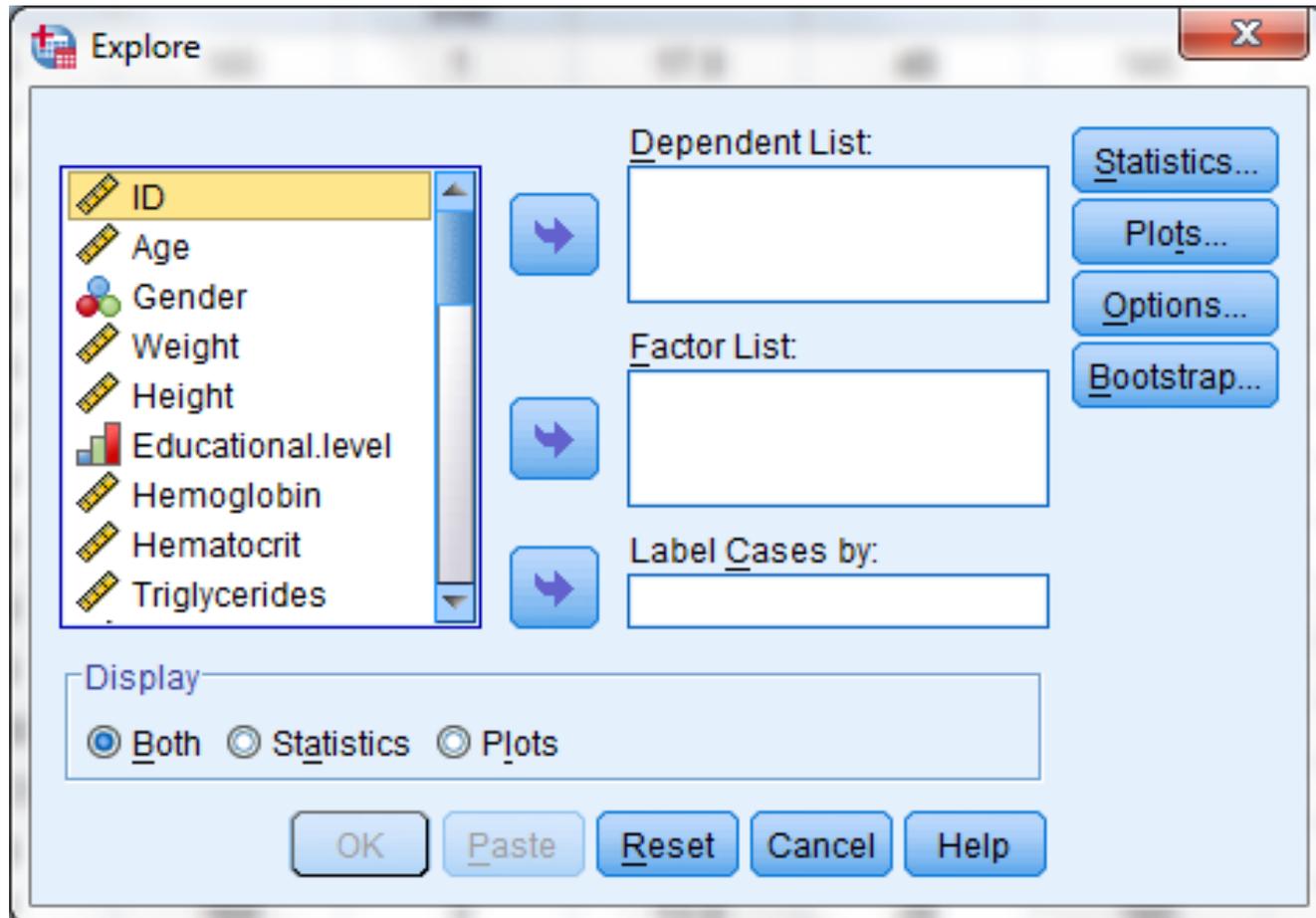
	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Age	70	51	32	83	59.53	1.481	12.394	153.615
Valid N (listwise)	70							

Explore

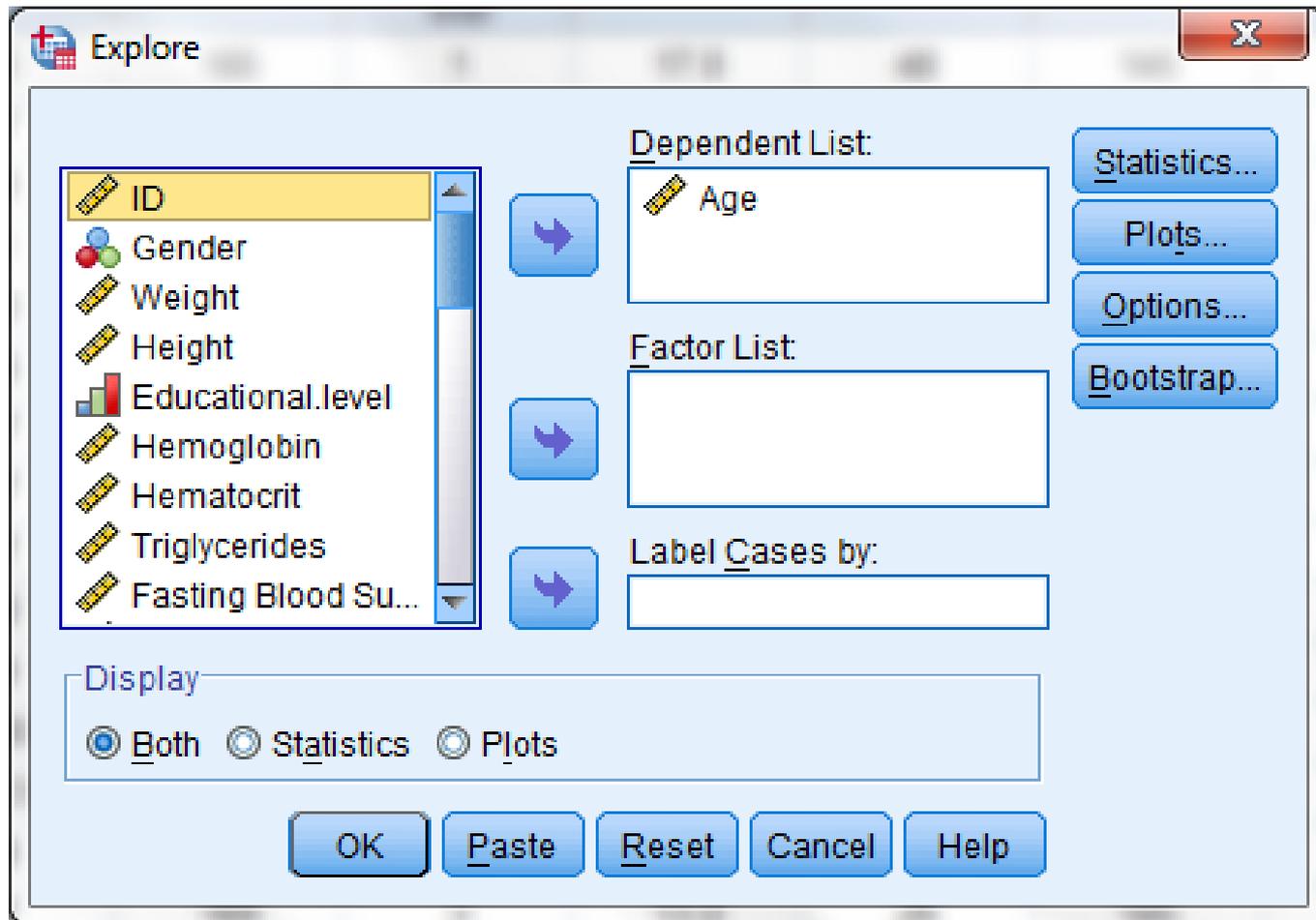
The screenshot shows the IBM SPSS Statistics Data Editor interface. The title bar indicates the file is *data2.sav [DataSet13]. The menu bar includes File, Edit, View, Data, Transform, Analyze, Direct Marketing, Graphs, Utilities, Add-ons, and Windows. The Analyze menu is open, showing options like Reports, Descriptive Statistics, Tables, Compare Means, General Linear Model, Generalized Linear Models, Mixed Models, Correlate, Regression, Loglinear, Neural Networks, Classify, Dimension Reduction, and Scale. The Descriptive Statistics submenu is also open, highlighting the Explore... option. Other options in the submenu include Frequencies..., Descriptives..., Crosstabs..., Ratio..., P-P Plots..., and Q-Q Plots... The data grid shows columns for ID and Age, with 10 rows of data.

	ID	Age
1	1	60
2	2	79
3	3	82
4	4	66
5	5	52
6	6	58
7	7	50
8	8	83
9	9	46
10	10	54

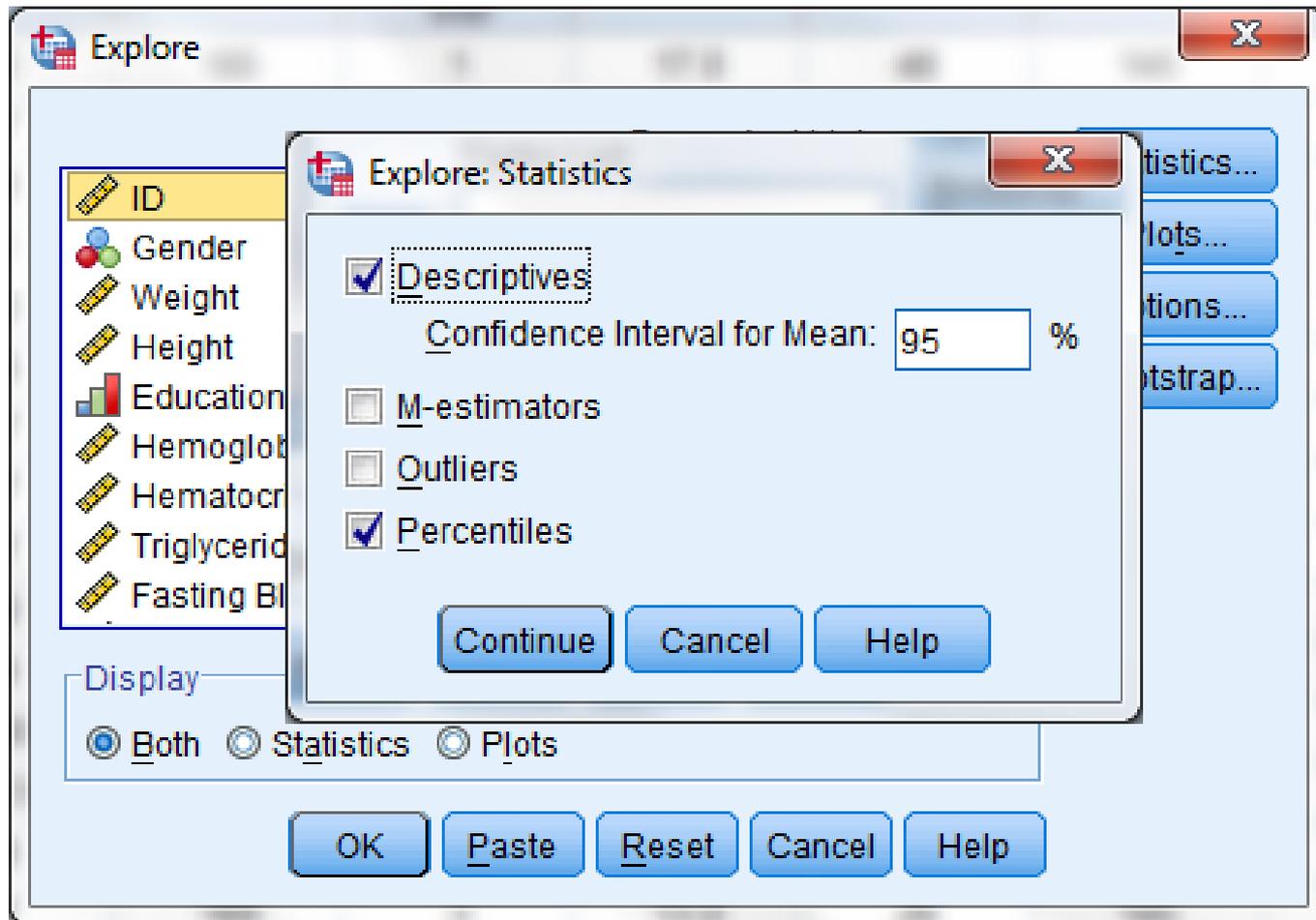
Explore



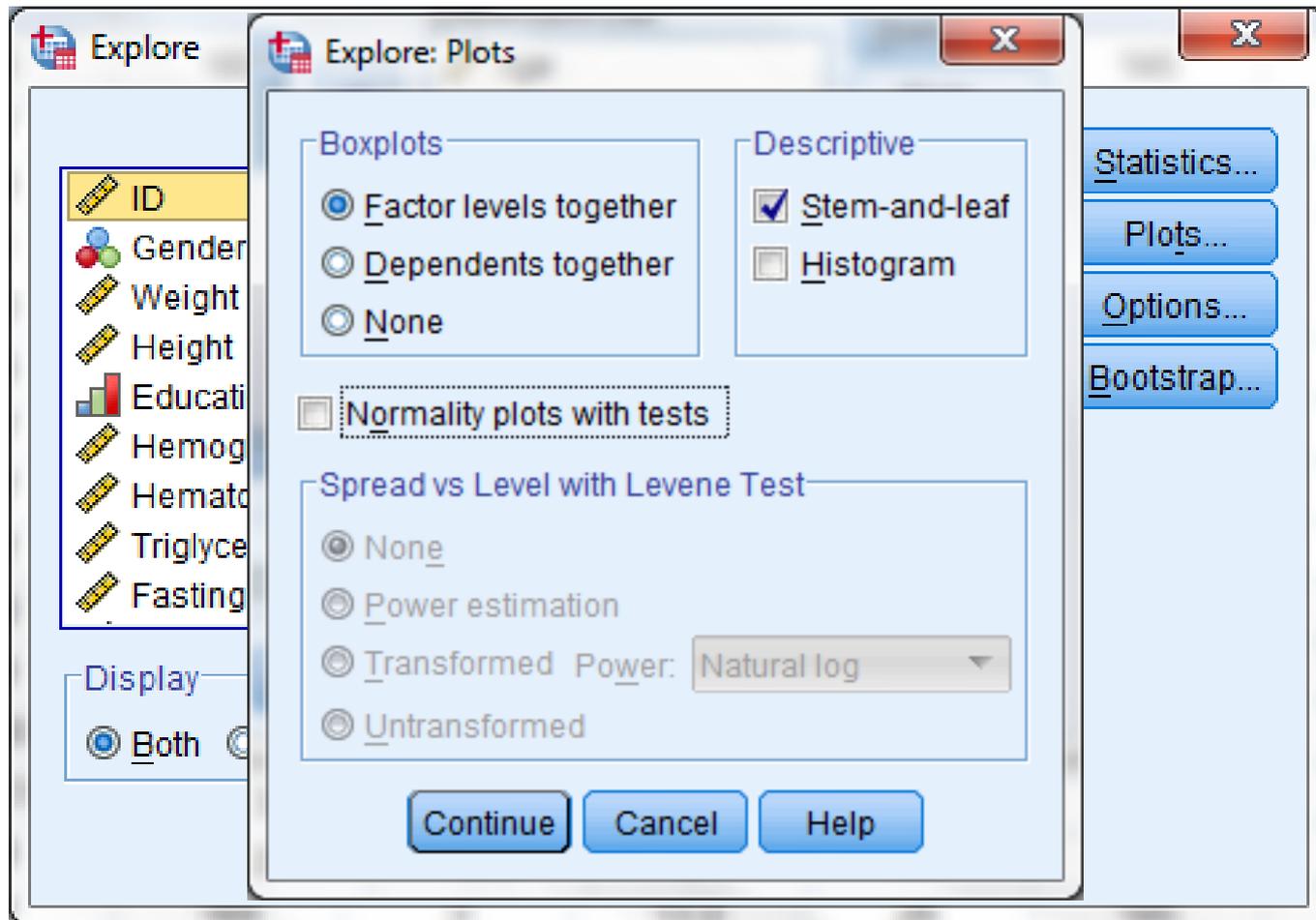
Explore



Explore



Explore



Explore

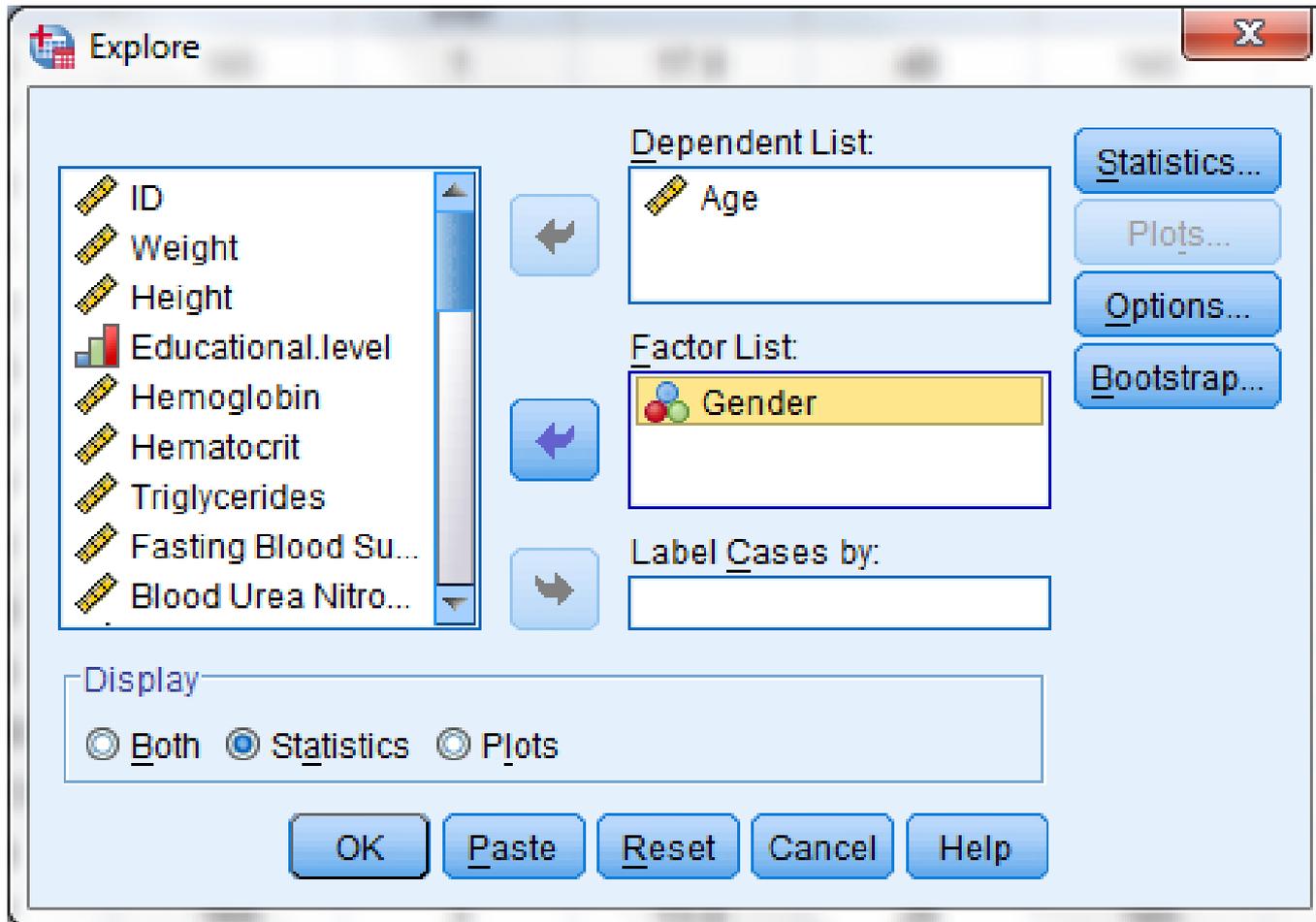
Descriptives

		Statistic	Std. Error	
Age	Mean	59.53	1.481	
	95% Confidence Interval for Mean	Lower Bound	56.57	
		Upper Bound	62.48	
	5% Trimmed Mean	59.65		
	Median	59.00		
	Variance	153.615		
	Std. Deviation	12.394		
	Minimum	32		
	Maximum	83		
	Range	51		
	Interquartile Range	17		
	Skewness	-.040	.287	
	Kurtosis	-.599	.566	

Percentiles

		Percentiles						
		5	10	25	50	75	90	95
Weighted Average (Definition 1)	Age	39.00	41.30	52.00	59.00	68.50	77.00	79.90
Tukey's Hinges	Age			52.00	59.00	68.00		

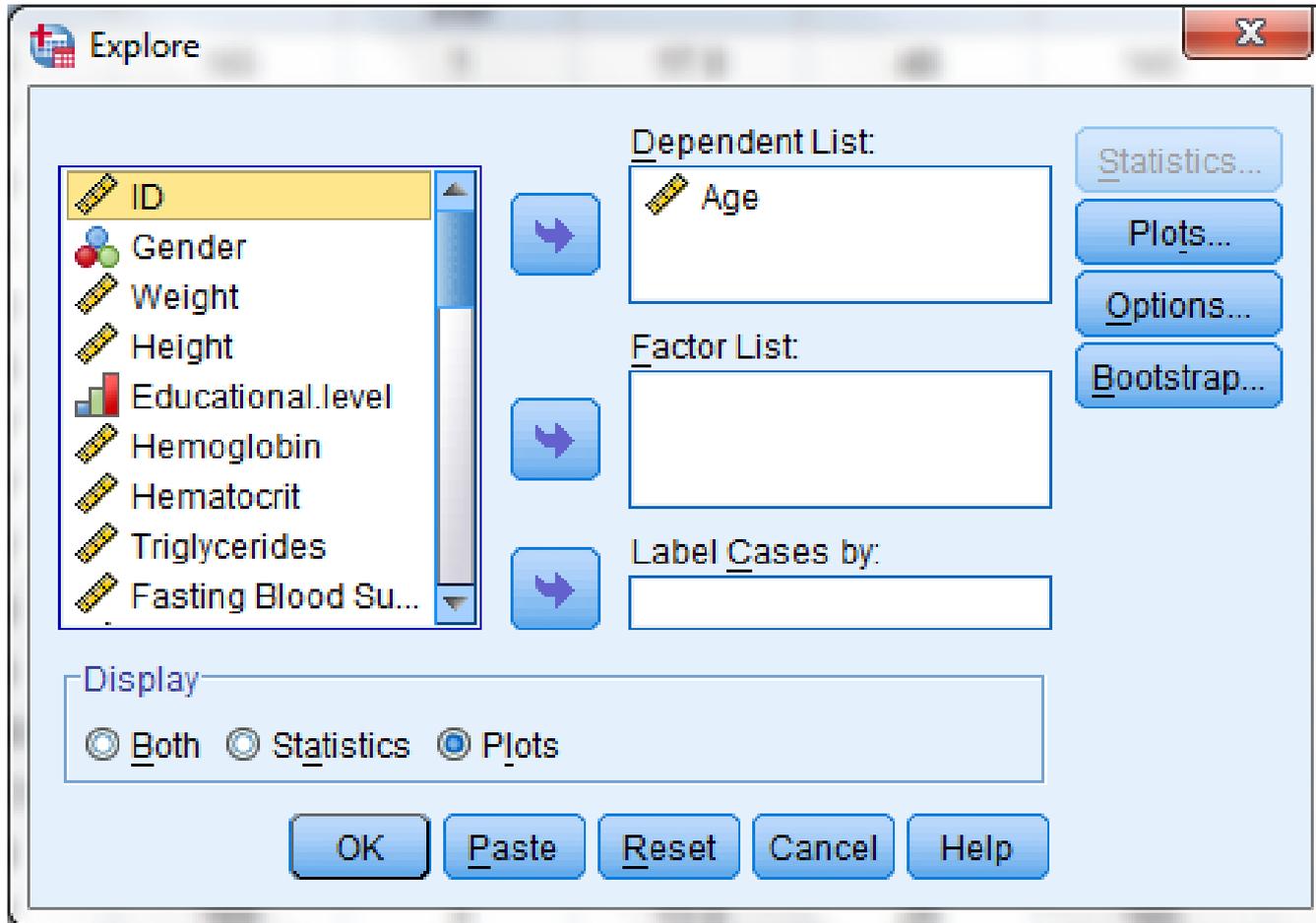
Explore



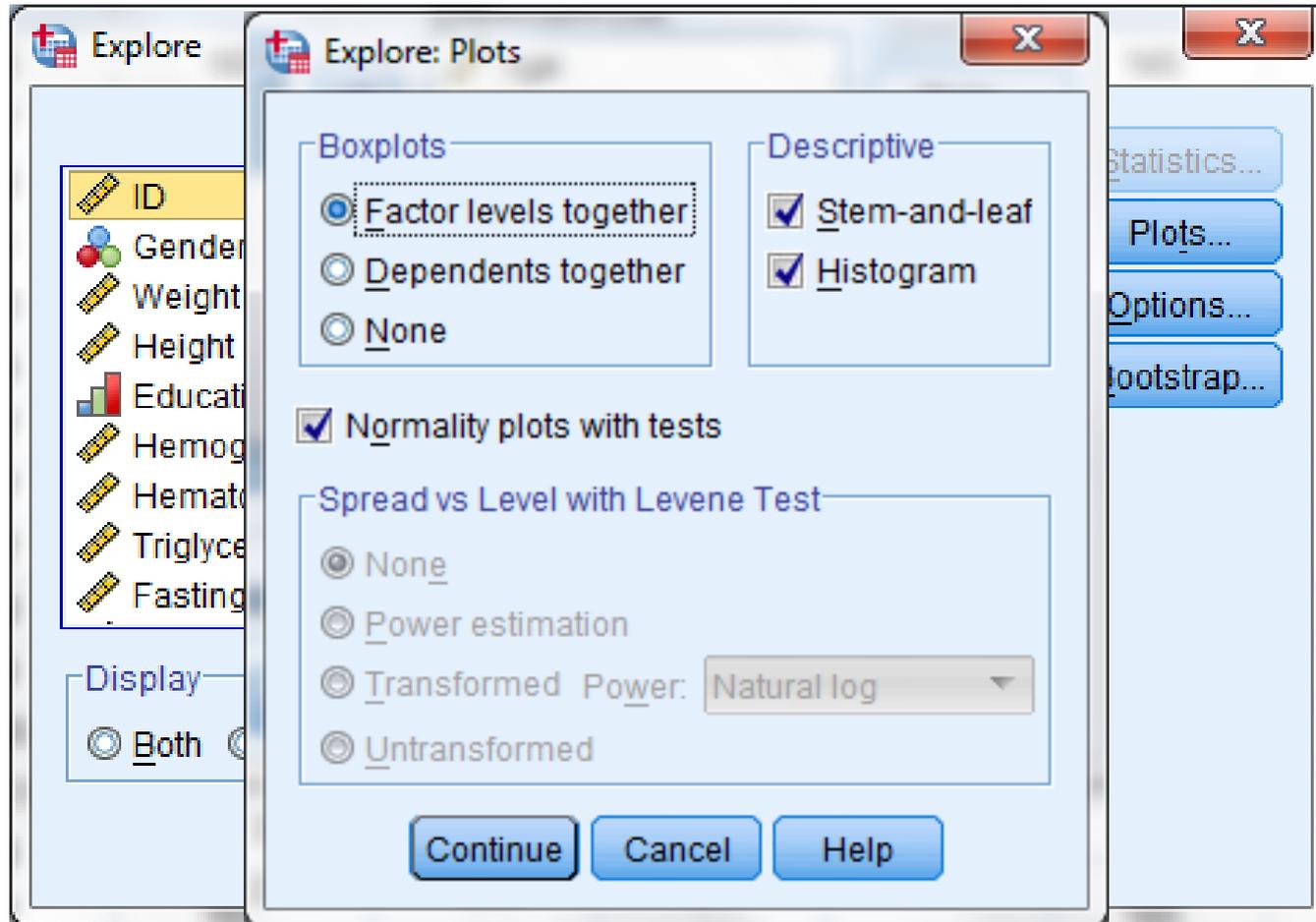
Descriptives

Gender			Statistic	Std. Error		
Age	Male	Mean	60.37	2.176		
		95% Confidence Interval for Mean	Lower Bound	55.95		
			Upper Bound	64.79		
		5% Trimmed Mean	60.55			
		Median	60.00			
		Variance	165.770			
		Std. Deviation	12.875			
		Minimum	32			
		Maximum	83			
		Range	51			
		Interquartile Range	20			
		Skewness	-.199	.398		
		Kurtosis	-.457	.778		
		Female	Female	Mean	58.69	2.032
				95% Confidence Interval for Mean	Lower Bound	54.56
Upper Bound	62.82					
5% Trimmed Mean	58.79					
Median	55.00					
Variance	144.516					
Std. Deviation	12.021					
Minimum	33					
Maximum	79					
Range	46					
Interquartile Range	17					
Skewness	.120			.398		
Kurtosis	-.604			.778		

Explore



Explore



Explore

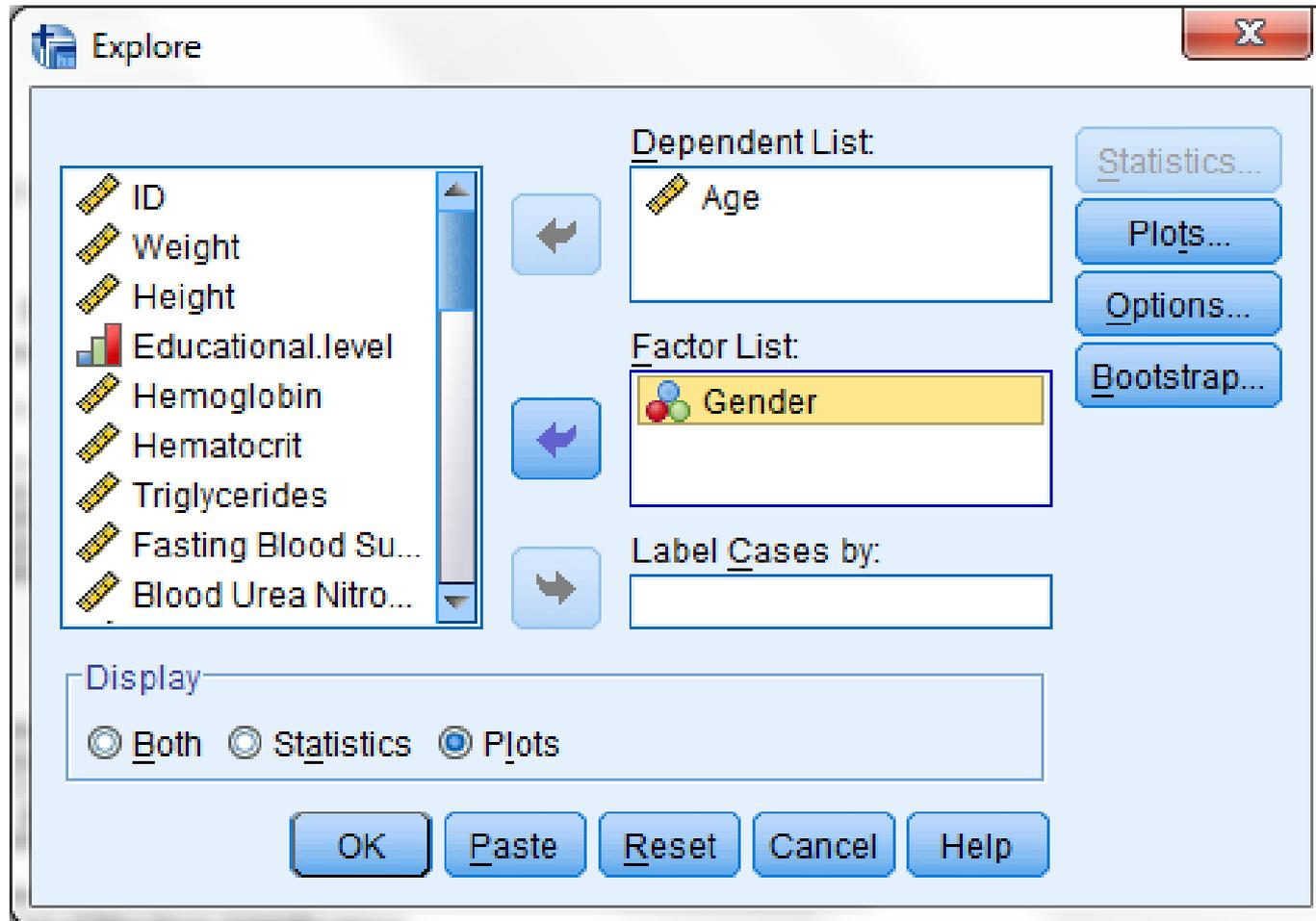
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age	.071	70	.200*	.982	70	.416

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Explore



Explore

Tests of Normality

Gender		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Age	Male	.074	35	.200 ^a	.981	35	.801
	Female	.135	35	.109	.965	35	.320

مرور مطالب

- صفحه SPSS
- ورود اطلاعات به SPSS
- دستورات Split و Select cases
- دستورات Compute و Recode
- تحلیل توصیفی

Thank You