

# Cronbach's Alpha

## A. Arranging your data

Click on the 'Variable View' window.

Give your variables names here. Maximum eight characters and no spaces.

Give your variables proper labels here.

	Name	Type	Width	Decimals	Labels	Values	Missing	Columns	Align	Measure	Role
1	i1	Numeric	8	2		None	None	8	Right	Nominal	Input
2	i2	Numeric	8	2		None	None	8	Right	Nominal	Input
3	i3	Numeric	8	2		None	None	8	Right	Nominal	Input
4	i4	Numeric	8	2		None	None	8	Right	Nominal	Input
5	i5	Numeric	8	2		None	None	8	Right	Nominal	Input
6	i6	Numeric	8	2		None	None	8	Right	Nominal	Input
7	i7	Numeric	8	2		None	None	8	Right	Nominal	Input
8	i8	Numeric	8	2		None	None	8	Right	Nominal	Input
9	i9	Numeric	8	2		None	None	8	Right	Nominal	Input
10	i10	Numeric	8	2		None	None	8	Right	Nominal	Input
11	i11	Numeric	8	2		None	None	8	Right	Nominal	Input
12	i12	Numeric	8	2		None	None	8	Right	Nominal	Input

Click on the 'Data View' window.

The diagram below shows dummy data for twenty participants who have completed a scale containing twelve items

	i1	i2	i3	i4	i5	i6	i7	i8	i9	i10	i11	i12
1	2.00	3.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	3.00	4.00
2	4.00	5.00	2.00	3.00	4.00	3.00	4.00	2.00	4.00	3.00	5.00	3.00
3	3.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	3.00	4.00	4.00
4	4.00	5.00	3.00	4.00	3.00	4.00	5.00	4.00	3.00	5.00	3.00	3.00
5	5.00	3.00	4.00	3.00	4.00	5.00	2.00	3.00	5.00	3.00	4.00	3.00
6	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	1.00	2.00	3.00	1.00
7	1.00	1.00	2.00	2.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00
8	1.00	4.00	5.00	3.00	4.00	3.00	4.00	5.00	4.00	3.00	2.00	3.00
9	2.00	3.00	3.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	3.00
10	3.00	1.00	1.00	1.00	4.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00
11	3.00	4.00	3.00	2.00	3.00	4.00	5.00	4.00	3.00	5.00	3.00	5.00
12	2.00	1.00	2.00	1.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	1.00
13	3.00	3.00	4.00	1.00	2.00	2.00	4.00	3.00	5.00	3.00	4.00	3.00
14	2.00	2.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	1.00	2.00
15	3.00	3.00	2.00	1.00	2.00	1.00	3.00	4.00	3.00	2.00	4.00	2.00
16	3.00	3.00	4.00	3.00	4.00	5.00	4.00	3.00	5.00	3.00	3.00	5.00
17	4.00	3.00	3.00	4.00	3.00	4.00	2.00	4.00	3.00	5.00	3.00	4.00
18	1.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	2.00	1.00	1.00
19	3.00	2.00	2.00	2.00	1.00	3.00	2.00	3.00	2.00	1.00	2.00	2.00
20	3.00	4.00	3.00	2.00	5.00	2.00	3.00	2.00	3.00	3.00	3.00	3.00

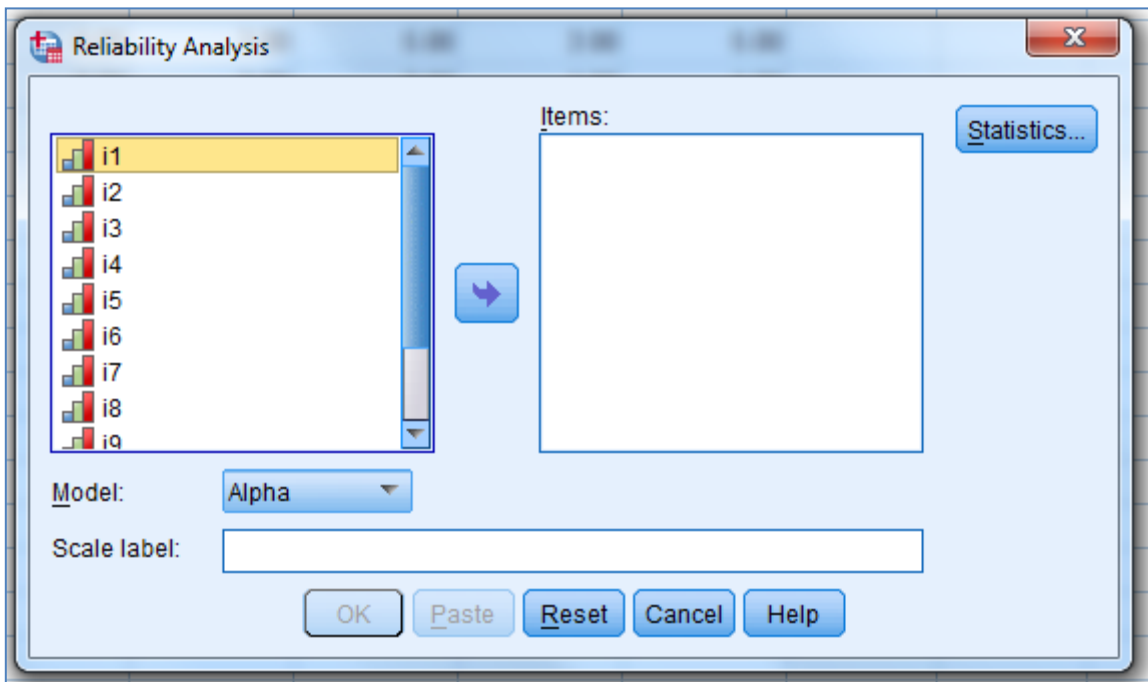
## B. Running Cronbach's Alpha

Go to 'Analyze' across the top. 'Scale' and 'Reliability analysis'

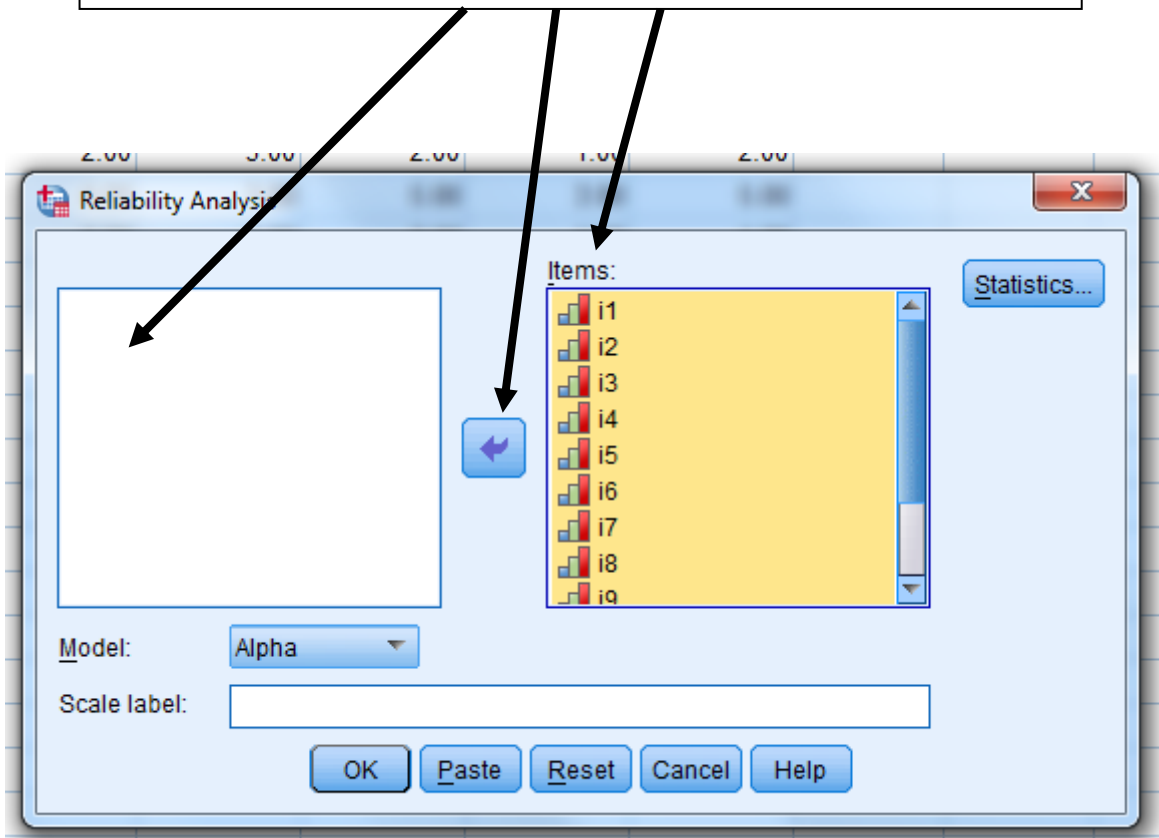
The screenshot shows the SPSS software interface. The 'Analyze' menu is open, and the 'Scale' option is selected. A sub-menu is displayed, showing 'Reliability Analysis...' as the first option. Arrows from the text box above point to the 'Analyze' menu, the 'Scale' option, and the 'Reliability Analysis...' option.

	i1	i2	i5	i6	i7	i8	i9	i10	i11
1	2.00	3.00	3.00	2.00	3.00	2.00	1.00		
2	4.00	5.00	4.00	3.00	4.00	2.00	4.00		
3	3.00	2.00	2.00	3.00	2.00	1.00	2.00		
4	4.00	5.00	3.00	4.00	5.00	4.00	3.00		
5	5.00	3.00	4.00	5.00	2.00	3.00	5.00		
6	2.00	1.00	3.00	2.00	1.00	2.00	1.00		
7	1.00	1.00	2.00	1.00	3.00	2.00	3.00		
8	1.00	4.00	4.00	3.00	4.00	5.00	4.00		
9	2.00	3.00	1.00	3.00	2.00	3.00	2.00		
10	3.00	1.00	4.00	1.00	3.00	2.00	3.00		
11	3.00	4.00	2.00	1.00	3.00	4.00	3.00		
12	2.00	1.00	4.00	5.00	4.00	3.00	5.00		
13	3.00	3.00	3.00	4.00	2.00	4.00	3.00		
14	2.00	2.00	2.00	3.00	2.00	1.00	2.00		
15	3.00	3.00	2.00	3.00	2.00	3.00	2.00		
16	3.00	3.00	4.00	5.00	4.00	3.00	5.00		
17	4.00	3.00	3.00	4.00	2.00	4.00	3.00		
18	1.00	2.00	2.00	3.00	2.00	1.00	2.00		
19	3.00	2.00	1.00	3.00	2.00	3.00	2.00		
20	3.00	4.00	5.00	2.00	3.00	2.00	3.00		
21									

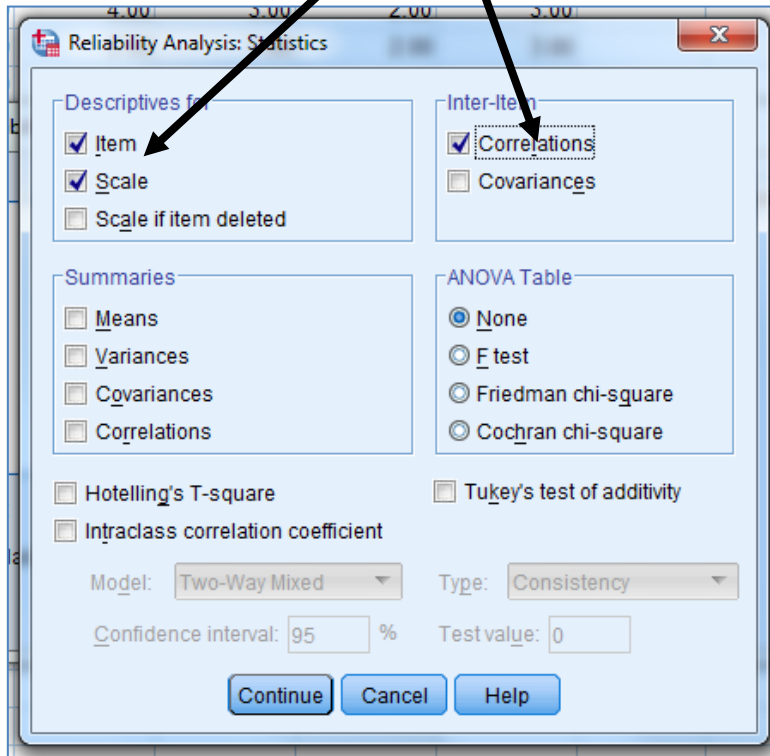
You will then see a box appear which looks like the one below



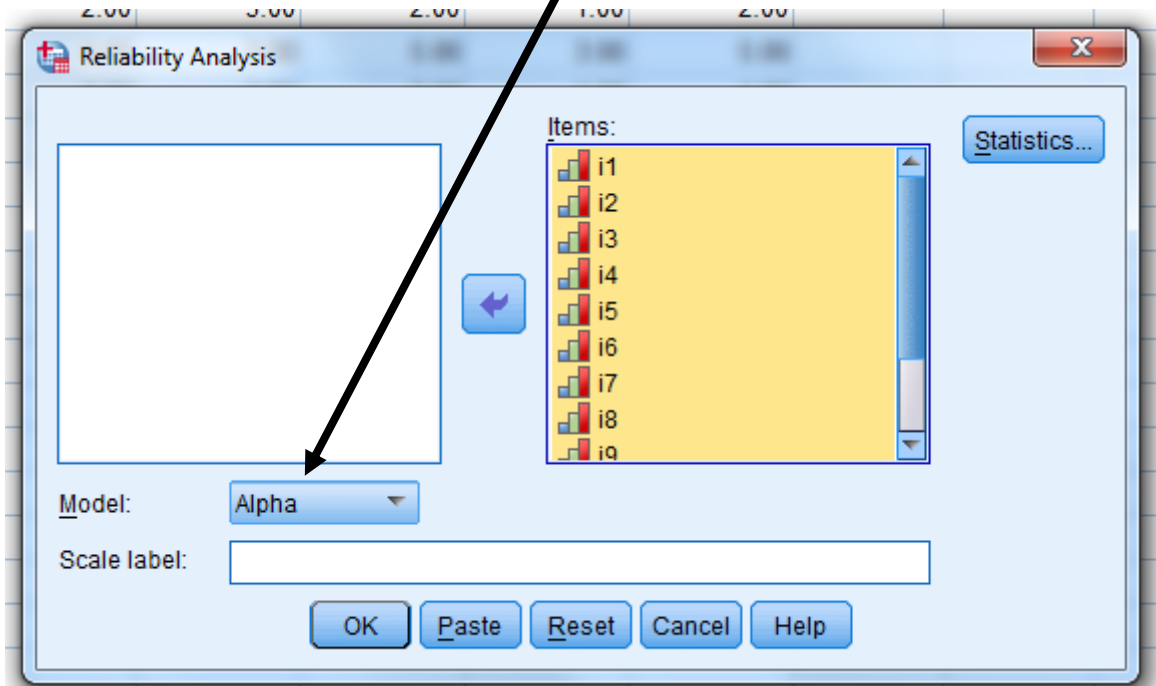
Highlight all twelve items and click on the arrow to move them over to the items box.



Next click on 'statistics' and you will see this screen. Check the boxes for item, scale and correlation as below.



Back to this box. Make sure 'Alpha' is displayed, then click 'OK'



## The Output

The output will look like in the diagram below. For now we are interested in the value of Alpha, which here is 0.88.

RELIABILITY

```
/VARIABLES=i1 i2 i3 i4 i5 i6 i7 i8 i9 i10 i11 i12  
/SCALE('ALL VARIABLES') ALL  
/MODEL=ALPHA  
/STATISTICS=DESCRIPTIVE SCALE CORR.
```

→ **Reliability**

[DataSet1] C:\Users\MGraff\Desktop\Cronbachs.sav

**Scale: ALL VARIABLES**

**Case Processing Summary**

		N	%
Cases	Valid	20	100.0
	Excluded <sup>a</sup>	0	.0
	Total	20	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.889	.888	12

**Item Statistics**

	Mean	Std. Deviation	N
i1	2.7000	1.08094	20
i2	2.7500	1.25132	20