

SPSS24 HELP SHEET: Spearman Correlation

CONTENTS

1. How to enter data to do a Spearman correlation.
2. How to do a Spearman correlation.

1. How to enter data to do a Spearman correlation.

For general advice on data entry see the “How to enter data into SPSS” help sheet.

Data used in correlations are related: Data from the one variable go in one column and data for the other variable in another column. Related data points must be in the same case (i.e., row). In this example, one variable is *eye* and the other variable is *blood*. *Eye* (variable label = Intraocular pressure) is measured in microlitres per minute and is a scale level of measurement. *Blood* (variable label = Pulsatile ocular blood flow) is measured in microlitres per minute. *ID* indicates the identity of the person from whom the data were collected.

Variable View

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure
1	ID	Numeric	8	0		None	None	8	Right	Nominal
2	eye	Numeric	8	1	Intraocular pres...	None	None	8	Right	Scale
3	blood	Numeric	8	0	Pulsatile ocular...	None	None	8	Right	Scale

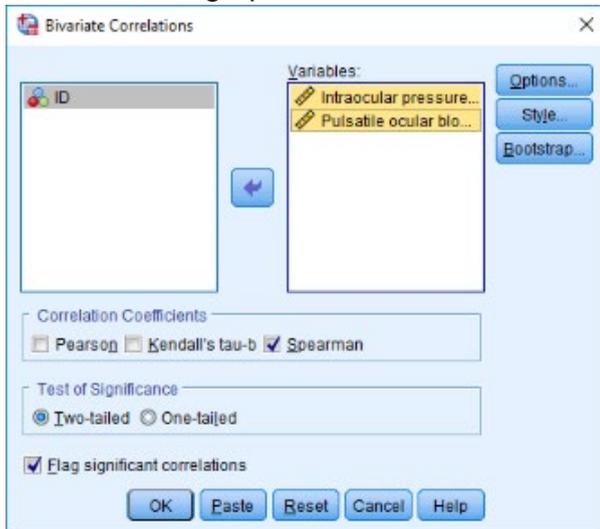
Data View (Value Labels on and off)

	ID	eye	blood	var	va
1	1	15.3	858		
2	2	11.3	1192		
3	3	17.3	987		
4	4	14.4	1264		
5	5	15.1	1372		
6	6	18.6	649		
7	7	18.1	979		
8	8	21.7	523		
9	9	13.8	1177		
10	10	9.2	1060		

2. How to do a Spearman Correlation.

To get SPSS to conduct a Spearman correlation: Open your data file.
Select: Analyze – Correlate – Bivariate...

This will bring up the **Bivariate Correlations** window:



Select the variables that you want to analyse, and send them to the **Variables** box (in this example *Intraocular pressure* and *Pulsatile ocular blood flow*). Make sure that the **Spearman** option is selected. (NB: You can do a Pearson and/or Kendall's correlation at the same time by also selecting these options). Click **OK**.

The key elements of the output are:

Correlations

		Intraocular pressure, IOP (mmHg)		Pulsatile ocular blood flow, POBF (microlitres/min)	
Spearman's rho	Intraocular pressure, IOP (mmHg)	Correlation Coefficient	1.000	-.576**	← Statistic (r_s)
		Sig. (2-tailed)	.	.008	← P
		N	20	20	← Number of objects (N)
	Pulsatile ocular blood flow, POBF (microlitres/min)	Correlation Coefficient	-.576**	1.000	
		Sig. (2-tailed)	.008	.	
		N	20	20	

** . Correlation is significant at the 0.01 level (2-tailed).

In summary the key information from the test is
 $r_s = -0.576$, $N = 20$, $P = 0.008$