

Instructions for carrying out statistical procedures and tests using SPSS

These instructions are closely linked to the author's book:

Essential Statistics for the Pharmaceutical Sciences
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For all references to chapters or tables, see the above book.

**Using SPSS to perform a
correlation analysis**

Using SPSS to perform a correlation analysis

Example: Table 14.1 Heights at which leaves were growing in the trees (M) and drug content (mg/100g dry leaf)

Enter the two sets of data into two suitably labelled columns that have been set up for numeric variables and then follow the menus:

Analyze / Correlate / Bivariate ...

Move both 'Height' and 'Drug' into the 'Variables' box.

The output is:

		Height	Drug
Height	Pearson Correlation	1	-.777(**)
	Sig. (2-tailed)		.000
	N	24	24
Drug	Pearson Correlation	-.777(**)	1
	Sig. (2-tailed)	.000	
	N	24	24

The output is repetitious and we only need focus on the two highlighted lines. These show a correlation coefficient of -0.777 and a P value reported as 0.000.

Notice the term 'Pearson correlation'. There is another form of correlation (Spearman correlation – See Chapter 17), but this is used less frequently and Pearson correlation is frequently referred to simply as 'Correlation'.

The correlation coefficient (r) is given as -0.777 . The minus sign indicates negative correlation and a value of -0.777 tells us that there is quite a strong relationship. The results are also statistically significant ($P < 0.001$)