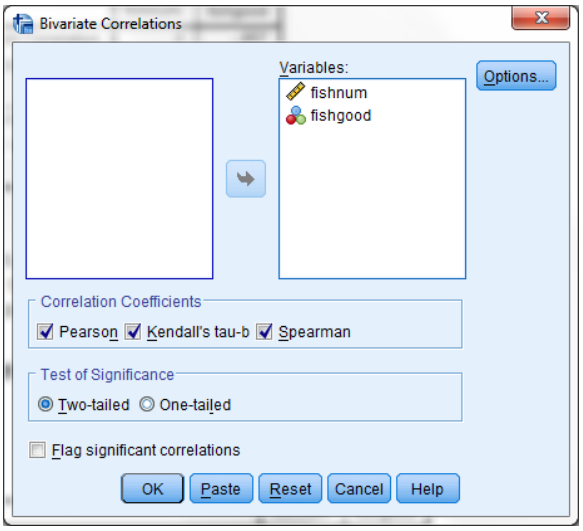
Paremetric & Nonparametric Analysis of the Relationship between two Quantitative Variables

SPSS makes it easy to get the "full set" of Bivariate analyses or 2 quantitative variables.

Analyze ➔ Correlate ➔ Bivariate



Highlight and move the variables you want to analyze into the "Variables" window

Be sure to check all the analyses you want to run.

The "Options" button will offer to calculate means and Std – no nonparametric Univariate statistics are available from this procedure.

Click "OK"

First you get Pearson's correlation

Correlations

		fishnum	fishgood
fishnum	Pearson Correlation	1	-.857
	Sig. (2-tailed)		.000
	N	12	12
fishgood	Pearson Correlation	-.857	1
	Sig. (2-tailed)	.000	
	N	12	12

Then you Spearman's and Kendal's Tau output.

Correlations

			fishnum	fishgood
Kendall's tau_b	fishnum	Correlation Coefficient	1.000	-.743
		Sig. (2-tailed)	.	.001
		N	12	12
	fishgood	Correlation Coefficient	-.743	1.000
		Sig. (2-tailed)	.001	.
		N	12	12
Spearman's rho	fishnum	Correlation Coefficient	1.000	-.886
		Sig. (2-tailed)	.	.000
		N	12	12
	fishgood	Correlation Coefficient	-.886	1.000
		Sig. (2-tailed)	.000	.
		N	12	12

r = -.867 tells us there is a strong negative linear relationship between the number fish and the quality of those fish in pet stores.

r = -.743 tells us that there is a negative relationship between the number fish and the quality of those fish in pet stores, with 74.3% disconcordant pairs.

r = -.886 tells us that there is a strong negative rank order relationship between the number fish and the quality of those fish in pet stores

Be sure in your write up to include Univariate stats and to specify what correlation you are presenting!