Covariance

The **Covariance** command calculates the covariance between all the pairs of variables. Covariance measures the strength of the correlation between variables and basically, covariance is an unstandardized Pearson correlation coefficient.

How To

- ✓ Run**: Statistics->Basic Statistics->Covariance…**
- ✓ Select variables.
- ✓ **Pairwise** deletion is default for missing values removal (to force the casewise deletion use the **Missing values** option in the **Preferences** window).

Results

Matrix with the covariance between all the pairs of variables is computed.

Covariance is defined as:

$$cov_{X,Y} = \frac{\sum_1^N (x_i - \bar{x})(y_i - \bar{y})}{N-1}.$$

The diagonal elements of the matrix are the variances of the variables.