Correlation discussion

Science, Statistics

Correlation Discussion Every correlation determines how two variables depend upon each other. However, there are a variety of methods that are used to work out the correlation of any given data set.

If we had two variables that were used on a ranked scale, then we would likely use Spearmans rank correlation coefficient. A real world example of the use of this method could be the feedback that is gathered about a teacher at the end of the semester. The rating scale would contain a number of variables such as agree, somewhat agree, neutral, somewhat disagree, and disagree. If we were comparing this response to individual students' grades, then Spearman's rank correlation coefficient would be the best fit.

On the other hand, if we had two variables that were measured using a number scale, then the best method to use is Pearson product-moment correlation coefficient. We would probably use this method if we wanted to determine the relationship between a child's age and their height.

The last type of method used for establishing correlation is if one of the variables uses a number scale and the other one uses a simply true/false scale. The best method to use here would be the point biserial correlation coefficient. The likely opportunity that this method would be used is a correlation between gender and height.

All of these methods can only tell us if two particular variables are related to each other, not whether one variable causes the other variable to change. Each method has its own positives and negatives, and each method can only really be used with its certain types of data.

A researcher may want to establish a correlation when they have a hypothesis, but do not have any way to prove it. Correlation allows

relationships to be seen between an independent and a dependent variable.

One of the variables has to be constant so that the other one can change

according to the stable one. Once these variables can be measured,

researchers can find links between certain actions.