

Evaluation vs Research - Glossary of Terms

Program Evaluation – A process for systemically determining the quality or effectiveness of a program and how it can be improved. Program evaluation is a **value judgment** about a program.

Research – Findings are presented with a value judgment not attached.

Correlation is a statistical measure expressed in a number that describes the size and direction of a relationship between two or more variables. Correlation refers to how closely the two data are related. It is described by using the square of the correlation coefficient R^2 . A coefficient's numerical value ranges from +1.0 to -1.0 with a positive value showing a positive value between the variables and a negative number showing a negative relationship between the variables.

A correlation between variables however **does not** automatically mean that the change in one variable is the cause of the change in the other.

Example: Students standardized test scores and their grades in their classes are two variables that can be compared for a particular subject area. They may be correlated i.e. They may get a good grade in math and a strong standardized test score. However, one did not cause the other. The degree of correlation though is of course important for us to understand because there is in fact an influencing relationship.

Another Example: Every time there is a house on fire, it is expected that there will be a fire truck. That is a correlation. However, we know fire trucks are not the cause of house fires.

Causation indicates that one event is the **result** of the occurrence of the other. In other words there is a causal relationship between the two events. This is also referred to as cause and effect. Causation is very difficult to determine. The use of a controlled study (treatment and control groups) is considered the most effective way to determine causation. This is also referred to as the “gold standards” of research.

*Example: Medical research where one group of patients with very similar characteristics get a placebo and one group a new type of medication is conducted to see if the new medication **causes an effect**.*

Another Example is if you go outside in the sun with no sunscreen – the variables exposure to UV rays and sunburn. If you use no sunscreen you will be burned and the longer you are in the sun, the worse it will be – this is a direct causal relationship.

Triangulation of data is using data sources from three or more sources to inform the research or evaluation question.

Significance (Statistical Significance) is the probability that the effect is not due to chance. If the result of a study is statistically significant than the hypothesis is considered valid or true.

Qualitative Data measure types that may be represented by name or symbol or a code. Observations, focus groups, interviews and open ended survey questions are all qualitative data.

Quantitative Data are measures of data that are expressed as numbers or numeric variable (how many, how much, how often). Test scores and attendance rates are two examples of quantitative data as are scaled response surveys.

Source for other statistical terms:

<http://www.abs.gov.au/websitedbs/a3121120.nsf/home/statistical+language>