Here is an overview on the main types of validity used for the scientific method.

"Any research can be affected by different kinds of factors which, while extraneous to the concerns of the research, can invalidate the findings" (Seliger & Shohamy 1989, 95).

Let's take a look on the most frequent uses of validity in the scientific method:

**External Validity**

External validity [1] is about generalization: To what extent can an effect in research, be generalized [2] to populations, settings, treatment variables, and measurement variables?

External validity is usually split into two distinct types, population validity [3] and ecological validity [4] and they are both essential elements in judging the strength of an experimental design [5].

**Internal Validity**
Internal validity [6] is a measure which ensures that a researcher's experiment design closely follows the principle of cause and effect [7].

“Could there be an alternative cause, or causes, that explain my observations and results?”

Test Validity

Test validity [8] is an indicator of how much meaning can be placed upon a set of test results.

Criterion Validity


- **Concurrent validity** [10] measures the test against a benchmark test and high correlation indicates that the test has strong criterion validity.

- **Predictive validity** [11] is a measure of how well a test predicts abilities. It involves testing a group of subjects for a certain construct and then comparing them with results obtained at some point in the future.

Content Validity

Content validity [12] is the estimate of how much a measure represents every single element of a construct.

Construct Validity

Construct validity [13] defines how well a test or experiment measures up to its claims. A test designed to measure depression must only measure that particular construct, not closely related ideals such as anxiety or stress.

- **Convergent validity** [14] tests that constructs that are expected to be related are, in fact, related.

- **Discriminant validity** [14] tests that constructs that should have no relationship do, in fact, not have any relationship. (also referred to as divergent validity)

Face Validity

Face validity [15] is a measure of how representative a research project is ‘at face value,’ and whether it appears to be a good project.

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