

# Reliability and validity

[Business](#), [Management](#)



Reliability and Validity Reliability and validity are important with any kind of research. Without them research and their results would be useless. This paper will define the types of reliability and validity as well as give examples of each. Both the data collection methods and the data collection instruments used in human services research will also be given. This paper will also look into why it is important to ensure that data collection methods as well as the instruments are reliable and valid.

Reliability There are several kinds of reliability used in research. The first kind is the alternate-form reliability. This kind of reliability consists of the degree of relatedness of different forms of the same test. For example, a psychological tests where the questions are changed. The second kind is the internal-consistency reliability. This kind of reliability is the overall degree of relatedness of all items in a test or raters in a judgment study. Internal-consistency is measured between different items on the same test.

An example of this would be If a respondent expressed agreement with the statements " I like to eat frozen chocolate" and " I've enjoyed eating frozen chocolate in the past," and disagreement with the statement " I hate frozen chocolate," this would be indicative of good internal consistency of the test. The third kind is the item-to-item reliability. This kind of reliability is the reliability of any single item on average. An example of this would be the reliability of two items such as a construction worker's hammers that are identical. The last kind of reliability that I will discuss is the test-retest reliability.

This kind of reliability consists of the degree of temporal stability (relatedness) of a measuring instrument or test, or the characteristic it is designed to evaluate, from one administration to another (Rosnow, 2008). Statics. com (n. d). states, " a group of respondents is tested for IQ scores: each respondent is tested twice - the two tests are, say, a month apart. Then, the correlation coefficient between two sets of IQ-scores is a reasonable measure of the test-retest reliability of this test.

" (Para. ) It is more reliable because the scores are on average between two separate situations. Validity Proving that the results of the research are correct is called validity. Construct validity refers to whether a scale measures or correlates with the theorized method. An example of this is an employer using selection methods to measure the degree to which a possible new employee has psychological traits called constructs. This includes verbal ability, intelligence, mechanical ability, and leadership ability. Content validity is the sampling of the relevant material or content that a test intends to measure. An example would be a typing test for a secretary or a test of checkbook balancing for an accountant.

Convergent and discriminant validity is the grounds established for a construct based on the convergence of related tests or behavior (convergent validity) and the distinctiveness of unrelated tests or behavior (discriminant validity). An example of this Trochim (2006), states " to show the discriminant validity of a Head Start program, we might gather evidence that shows that the program is not similar to other early childhood programs that don't label themselves as Head Start programs. Or, to show the discriminant

validity of a test of arithmetic skills, we might correlate the scores on our test with scores on tests that of verbal ability, where low correlations would be evidence of discriminant validity.

” (Para. 10) Criterion validity is the degree to which a test or questionnaire predicts an outcome based on information from other variables. An example would be high school student’s grades predict his or her success in college.

External validity is the generalization of an inferred causal relationship over different people, settings, manipulations (or treatments), and research outcomes. An example would be using a sample from a population. Face validity is a property of a test intended to measure something. It is the validity of a test at face value or the degree to which a test or other instrument “ looks as if” it is measuring something relevant. An example would be if you have a test to measure whether students can read at a fifth grade level, and the people you show it to all agree that it looks like a good test of fifth grade reading ability, the face validity of the test is shown.

Internal validity is the soundness of statements about whether one variable is the caused of a particular outcome. An example would be manipulating the variable in a scientific experiment.

Statistical-conclusion validity is the degree to which conclusions about the relationship among variables based on the data are correct or ‘ reasonable’. An example would be doing a study on the relationship between socioeconomic status and attitudes about free health care . Based on the data, it may be concluded that persons with lower economic status tend to be more opposed.

Conclusion validity is the degree to which the conclusion reached is credible or believable (Rosnow, 2008). Data Collection Methods in Human Services Data collections methods include experiments, clinical trials observing and recording and events, obtaining relevant data from management information systems, and administering surveys with closed-ended questions. It is important to ensure these data collection methods are both reliable and valid because if unreliable and invalid data is used the results of the research would be false. Data Collection Methods in Managerial Research Case studies reveal the strengths and weaknesses within the agency. Case studies analyze results of information obtained from cases pertaining to the population served.

The cases are also evaluated against other case studies to see similarities and discrepancies. Case studies give human service agencies detailed information about the individual and population studied. Performance appraisal systems are used by managers to track employees work performance. It is important for these systems to be reliable to objectively and consistently measure the employee's performance. All employees activities and result should be measured the same. Without reliability employees would not have faith in his or her manager and the appraisal process.

Conclusion Reliability and validity enable human service professionals to use true data and obtain legitimate results. Using these types of reliability and validity allows researchers to provide clients and agencies sound, appropriate conclusions. Using data collection methods managers can

improve employee performance and services provided to clients. Reliability and validity ensure accurate data is used in human services research.

References Rosnow, R. L. (2008) Beginning Behavioral Research: A Conceptual Primer, Retrieved from