

What is the principal difference between validity and reliability?

Validity, which must be proven before reliability, is the conclusion to whether or not a phenomenon, or issue under study, is being measured correctly (Hagan, 2010). First, it must be determined that the measurement is being done correctly, or as the text states "the measuring instrument in fact measures what it claims to measure" (Hagan, 2010, p. 239). Next, the reliability of the instrument, or form of measuring the study, is tested to make sure it is stable and works consistently every time (Hagan, 2010). It would be pointless for a researcher to first make sure that a measuring instrument works consistently, only to later find that it does not measure accurately. The instrument must work, and it must work the same every time it is used, otherwise, the conclusion from the measuring will not be true. Types of validity include: Face; Content; Construct; Pragmatic; and Convergent-discriminant (Hagan, 2010). Types of reliability include: Test-retest; Multiple forms; and the Split-half technique (Hagan, 2010).

For research to be considered trustworthy, the conclusion must be valid, or sound, and others must be able to prove that the research and conclusion are valid. If the means for measuring the research is valid and reliable, the research itself should be valid and reliable, thus the researcher himself or herself will be considered a valid and reliable researcher. If the research or conclusion is proven to be invalid, or not true, the researcher's career may suffer and he or she may be construed as unreliable. It is best for the researcher to determine the validity and reliability of the measuring instruments that will be used before he or she begins his or her actual study (Hagan, 2010). This may be done by doing "pretests" or "pilot studies" (Hagan, 2010).

References

Hagan, F. E. (2010). *Research methods in criminal justice and criminology* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

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When it comes to research validity logically precedes with that of reliability (Hagan, 2010). However, validity is more of asking if the results are true or valid. Validity is more concerned with the measurements and is it accurate. For example, if a study is being conducted on training methods and which method is best for producing strength, a valid measure of strength must be produced to properly evaluate the effects of the training methods (Thomas, Nelson, & Silverman). Reliability is more concerned with the consistency of measurement (Hagan, 2010). With reliability, the measurements of research must present the same results and if the test is not considered valid, it cannot be reliable. However, there are results that can be considered reliable but not valid. For instance, if someone is weighing daily on a

scale that is broken, the results can be reliable but because the scale is broken, it is not valid. (Thomas, Nelson, & Silverman).

Hagan, F. E. (2010). *Research methods in criminal justice and criminology* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

Thomas, J., Nelson, J., & Silverman, S. (2011). *Research Methods in Physical Activity* (6th ed.). Champaign, IL: Thomson-Shore.