

A reminder about Reliability and Validity



Reliability

- Refers to the consistency or stability of a measure
- Any measure should yield a similar estimate on repeated use if the measured trait has not change
- Four major types of reliability in Work Psychology:

Reliability

Test-retest
reliability

Equivalent-
form
reliability

Internal
consistency
reliability

Inter-rater
reliability

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Test-retest

- Reveals stability of test upon repeated applications / over time
- Works by correlating two sets of scores
- *Coefficient of stability*

Equivalent-form

- Reliability that reveals the equivalence of test scores between two versions/norms of a test
- Least popular in its use – difficult to create one test let alone two!
- *Coefficient of equivalence*

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Internal-consistency

- Reliability that reveals the homogeneity of the items within a test
- 1. split-half reliability
 - Divide items in half, correlate between two halves
- 2. Cronbach's alpha
 - Response to each item correlated with response to every other item
 - Homogenous = high alpha

Inter-rater

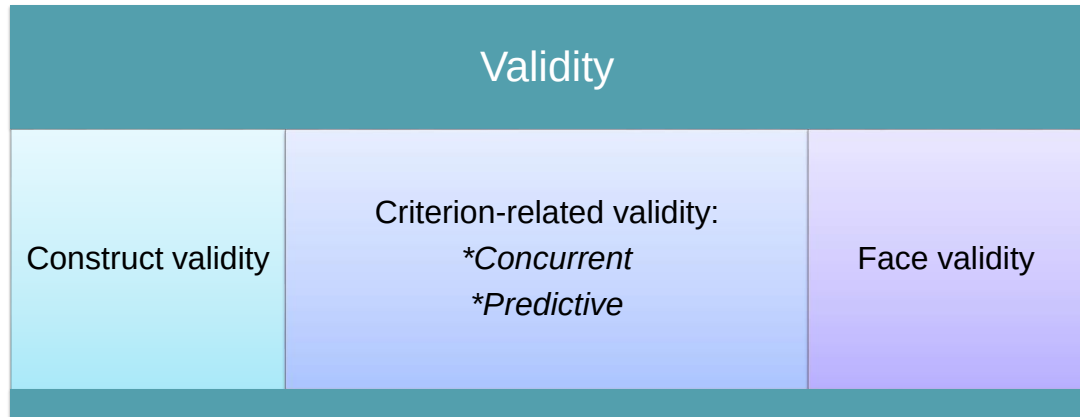
- Reveals the degree of agreement among the assessment of two or more raters
- Used extensively in work psychology
- Can be used for analysing a job, as well as where multiple interviewers evaluate job candidates

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Validity

- Refers to the accuracy and precision of a measure
- Validity refers to a tests appropriateness for predicting inferences about criteria
- Controversial; argue that there is only one 'valid' measure of validity...

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Construct Validity

- The degree to which a test is an accurate measure of the **construct** it purports to measure
 - Compare scores to other known measures of the same construct
 - We want the scores to be related to, or convergent with, other assessments, PLUS divergent with an assessment of an unrelated construct

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Face Validity

- The appearance that items in a test are appropriate for the intended use
- Judged solely on how the test appears 'at face value' to takers of the test

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Criterion-related validity

Degree to which a test forecasts or is statistically related to a criterion

Concurrent

- How well a predictor can predict a criterion
- No time interval between collecting predictor and criterion data

Predictive

- Collect predictor information and use it to forecast future criterion performance

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Criterion-related validity

- Expressed through a Validity Coefficient; a statistical index (correlation coefficient) that reveals the degree of association between two (or more) variables.
- Often used in the context of prediction.
- Explained in terms of 'variance'
- Related to correlation coefficient (specifically r^2)