QUESTIONNAIRE RELIABILITY

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QUESTIONNAIRE RELIABILITY

Reliability

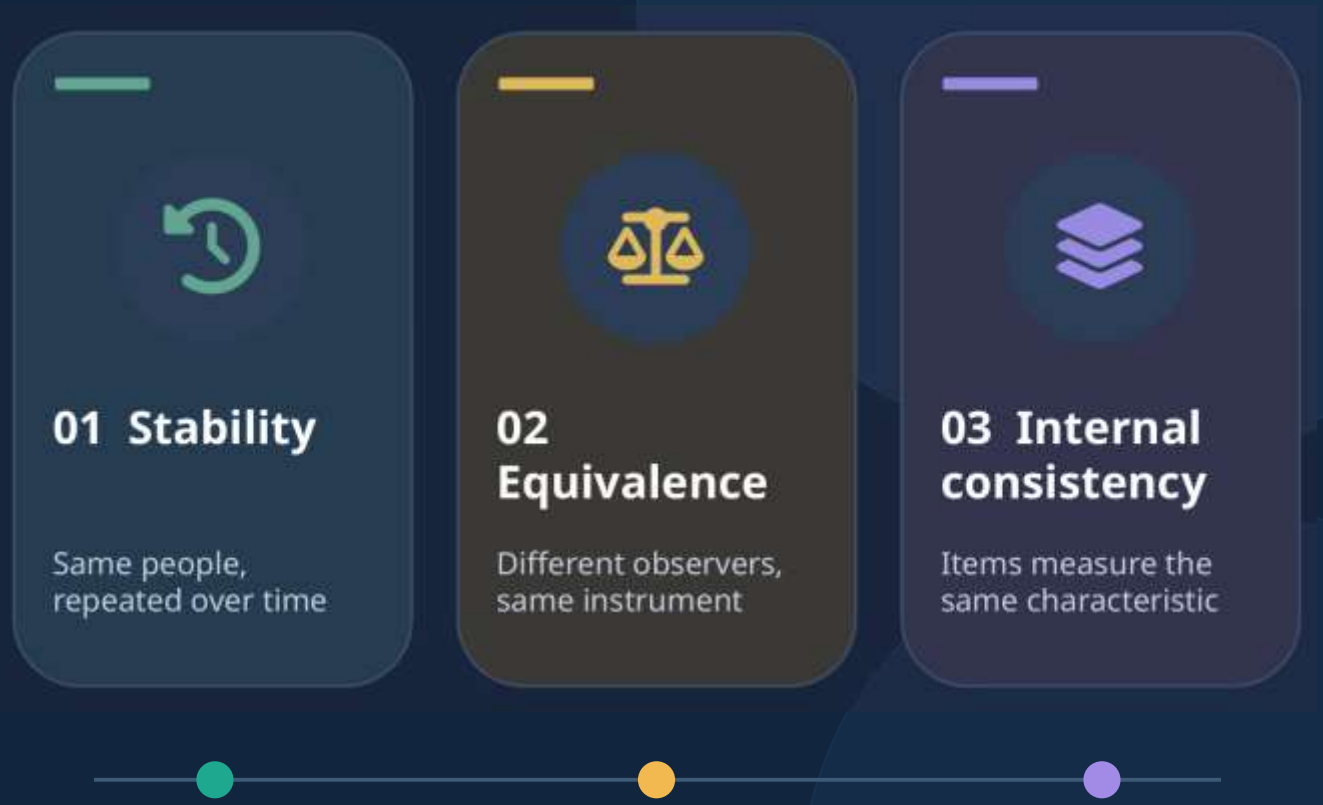
Consistency in measurement

Reliability is the extent to which a questionnaire produces the same results in repeated trials.

When selecting a research instrument, consider three dimensions:

STABILITY • EQUIVALENCE • INTERNAL CONSISTENCY

THREE DIMENSIONS TO CHECK



A reliable instrument produces consistent results under the relevant conditions.

Stability

Does the same instrument produce similar results when used again with the same people?



HOW STABILITY IS ESTIMATED

- Administer the same instrument to the same individuals at two different times.
- Determine the correlation between the test scores and retest scores.

TIMING MATTERS

The interval should be neither too short nor too long.

A short gap can create memory effects; a long gap may allow health status to change.

Equivalence

Do two or more researchers obtain similar scores using the same instrument?



WHAT IT MEASURES

Inter-rater reliability estimates agreement in scores assigned by different researchers.

SCORING PROCESS

Researchers score the event independently using agreed criteria, then calculate the correlation between scores.

Internal consistency

Do the instrument's multiple items consistently measure the same characteristic?



THREE METHODS

A Average Inter-Item Correlation

Association between item pairs

B Split-Half Reliability

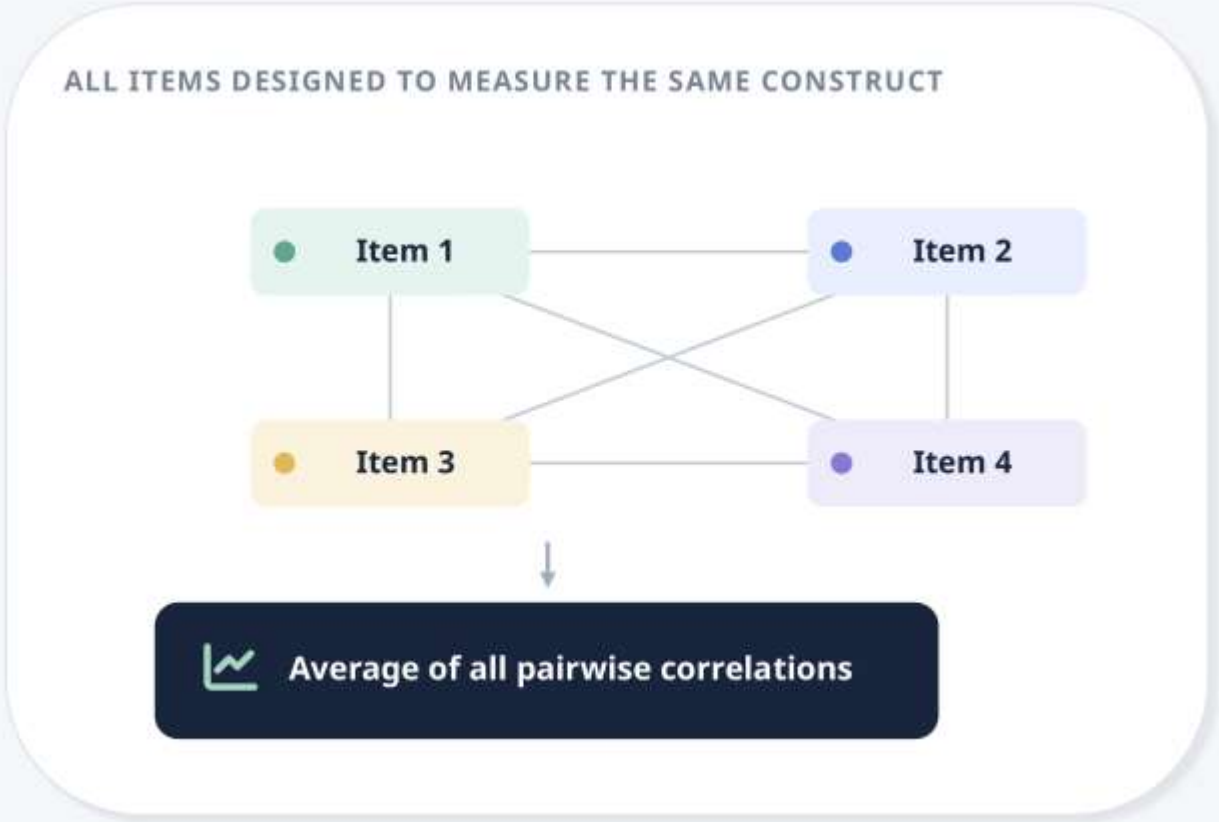
Association between two sets

C Cronbach's Alpha (α)

Average across split-half estimates

Average Inter-Item Correlation

Calculate associations between pairs of items, then average all of those correlations.



HOW IT WORKS

01 Use all relevant items

Include the items designed to measure the same construct.

02 Calculate each pair

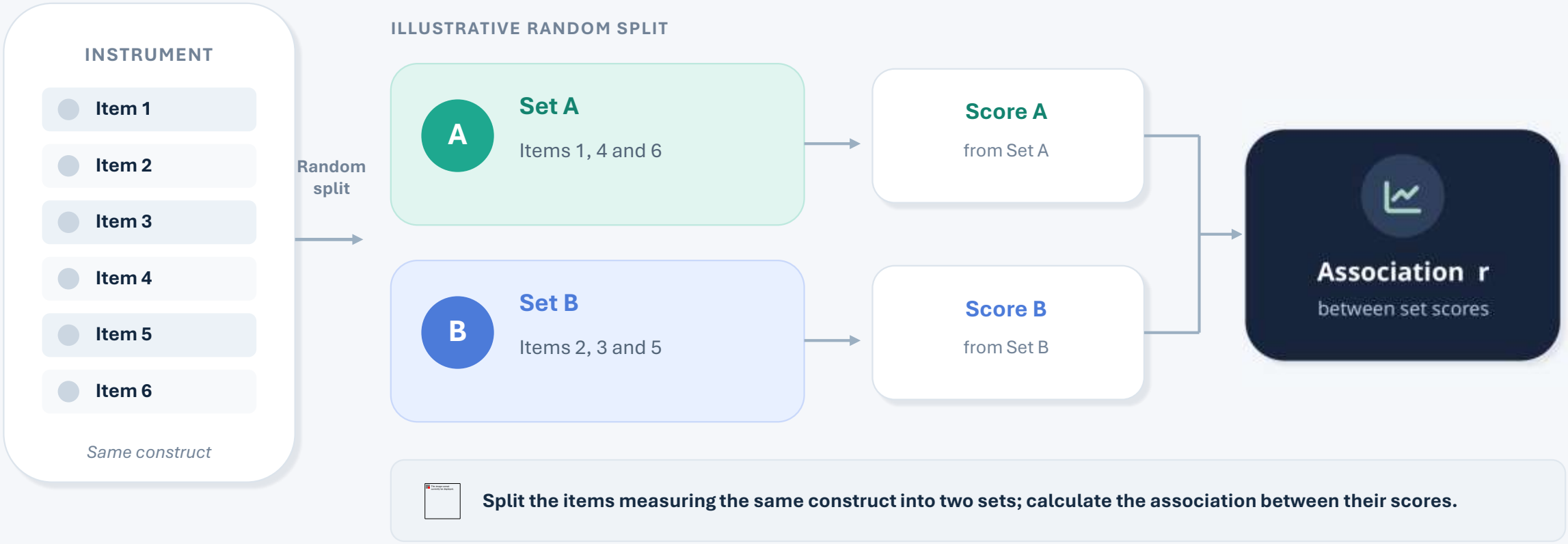
Determine the association between every pair of items.

03 Average the correlations

The average inter-item correlation is the mean of all pairwise correlations.

Split-Half Reliability

Randomly divide the items into two sets and compare the scores produced by each set.



Split the items measuring the same construct into two sets; calculate the association between their scores.

Cronbach’s Alpha (α)

Cronbach’s Alpha is mathematically equivalent to the average of all possible split-half estimates.



Equivalent to the average of all possible split-half estimates.

Statistical software samples item subsets and averages their correlations.

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Thank you