

# Validity

- Factor Analysis
  - Are the underlying dimension or dimensions of the construct found in the instrument used to measure it?
  - Technique mathematically constructs the underlying dimensions. Look whether the measured elements of the construct that are part of the same underlying dimension of the construct correlate with one another.

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- Factor Analysis Example(Table shows results of factor analysis)
- Six measures on an intelligence test factor into two dimensions: Verbal and spatial ability
- Notice tests correlate with one factor, but not with the other (e.g., vocabulary = .80 with Factor One, .10 Factor Two).

Variable	Factor 1 (Verbal)	Factor 2 (Spatial)
Vocabulary	.80	.10
Sentence Comprehension	.75	.00
Everday Factual knowledge	.70	.02
Perceptual Identification	.10	.70
Block Design	.08	.80
Mental object rotation	.01	.87

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- Correlations with factors called loadings.
- Pattern of loadings helps us interpret the underlying dimension (e.g., vocabulary, sentence comprehension, and factual knowledge all correlate factor one; hence we probably are correct to call factor one “Verbal ability”)

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