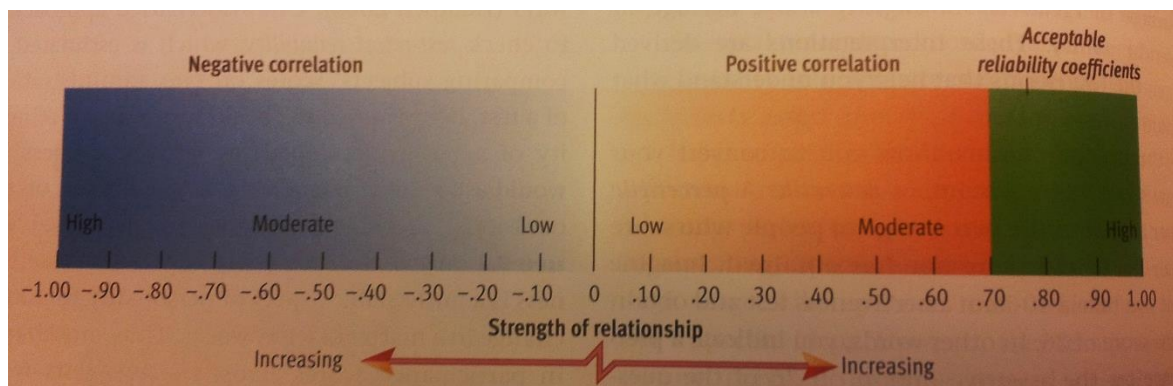


## Intelligence and Psychological Testing Summary

- Psychological Test: Standardised measure of a sample of a person's behaviour.
  - Measure individual differences among people in their abilities, aptitudes, interests and aspects of personality.
  - Your responses to a psychological test represent a sample of your behaviour.
- Limitations:
  - A particular behaviour sample may not be representative of your characteristic behaviour.
- Types of tests:
  - Mental Ability Tests:
    - ❖ Intelligence Tests: Measure general mental ability.
      - ☞ Assess intellectual potential rather than previous learning or accumulated knowledge.
      - ☞ Emotional intelligence
        - ✚ Recognise emotion in self and others
        - ✚ Effect of emotions on performance
        - ✚ Analyse and understand emotions
        - ✚ Regulation of emotions
    - ❖ Aptitude Tests: Assess specific types of mental abilities.
      - ☞ Designed to measure potential more than knowledge, but they break mental ability into separate components.
    - ❖ Achievement Tests: Gauge a person's mastery and knowledge of various subjects.
      - ☞ Measure previous learning instead of potential.
  - Personality Tests: Measure various aspects of personality, including motives, interests, values and attitudes.
    - ❖ Many psychologists prefer to call these tests scales because, unlike tests of mental abilities, the questions do not have right or wrong answers.
- Standardisation: Refers to the uniform procedures used in the administration and scoring of a test.
- Test Norms: Provide information about where a score on a psychological test ranks in relation to other scores on that test.
  - Percentile Score: Indicates the percentage of people who score at or below the score one has obtained.
  - Standardised Group or Norm Group: The sample of people the norms are based on.
- Reliability: Refers to the measurement consistency of a test (or other kinds of measurement techniques).
  - Test-Retest Reliability: Estimated by comparing subjects' scores on two administrations of a test.
  - Correlation Coefficient: A numerical index of the degree of relationship between two variables.



- ❖ Relationship between variables
  - ☞ Range: -1 to 1.
  - ☞ Closer to +1 = stronger relationship.
  - ☞ Closer to zero = weaker/no relationship
- ❖ Positive scores indicate a positive relationship
  - ☞ High scores on one variable associated with high scores on the other variable
- ❖ Negative scores indicate a negative relationship
  - ☞ High scores on one variable associated with low scores on the other variable.
- Validity: Refers to the ability of a test to measure that it was designed to measure.
  - Content Validity: Refers to the degree to which the content of a test is representative of the domain it's supposed to cover.
  - Criterion-Related Validity: Estimated by correlating subjects' scores on a test with their scores on an independent criterion (another measure) of the trait assessed by the test.
  - Construct Validity: The extent to which evidence shows that a test measures a particular hypothetical construct (psychological tests attempting to measure abstract personal qualities, such as creativity, intelligence, extraversion or independence that have no obvious criterion measures).

#### *Evolution of Intelligence Testing:*

- Francis Galton: Concluded that success runs in families because great intelligence is passed from generation to generation through genetic inheritance.
  - Started the nature v nurture debate.
- Alfred Binet: Published the first useful test of general mental ability in 1905.
  - Mental Age: Indicated that he or she displayed the mental performance typical of a child of that chronological (actual) age.
- Stanford-Binet Intelligence Scale: Loyal to Binet's original concept, but also incorporated William Stern's intelligence quotient.
- William Stern:
  - Intelligence quotient (IQ): A child's mental age divided by chronological age, multiplied by 100.
$$IQ = \frac{\text{mental age}}{\text{chronological age}} \times 100$$
  - Average IQ = 100
- David Wechsler:
  - Published the first high quality IQ test designed specifically for adults, which became known as the Wechsler Adult Intelligence Scale (WAIS).
    - Wechsler made his scales less dependent on subjects' verbal ability than the Stanford-Binet. He included many items that required nonverbal reasoning.
    - Wechsler discarded the intelligence quotient in favour of a new scoring scheme based on the normal distribution.
    - Abandoned chronological age
- Charles Spearman:
  - Factor Analysis: Correlations among many variables are analysed to identify closely related clusters of variables.
  - Concluded that all cognitive abilities share an important core factor, which was labelled g, for general mental ability. However, he also recognised that people also have special abilities such as numerical reasoning or spatial ability which he believed is largely determined by their general mental ability.