



On Testing and Assessment

by:

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Psychological test

- -is an objective and standardized measure of a sample of behavior
- -norm-referenced test

Assessment

- the action or an instance of making a judgment about something
 - Who performed better?
 - Is he doing good in class?
 - Should she be promoted or retained?

Uses of Testing

- Classification
 - Diagnosis and treatment planning
 - Self-knowledge
 - Program evaluation
 - Research
-
- These applications frequently overlap and, on occasion, are difficult to distinguish one from another.

Classification

- Assigning a person to one category rather than another.
- Placement, screening, certification, and selection

Diagnosis and treatment planning

- Diagnosis consists of two intertwined tasks: determining the nature and source of a person's abnormal behavior, and classifying the behavior pattern within an accepted diagnostic system.
- Diagnosis should be more than mere classification, more than the assignment of a label.

Self-knowledge

- Psychological tests also can supply a potent source of self-knowledge.
- In some cases, the feedback a person receives from psychological tests can change a career path or otherwise alter a person's life course.

Program evaluation

- Educational program evaluation and social program evaluation

Research

- Collecting the data from psychological tests to check the research hypothesis.

User Qualification

Level A

Level B

Level C

Introduction to Psychological Testing

Type of Tests

- Individual Tests
Administered by a single examiner to one person.
- Group Tests
Administered by a single examiner to several persons.

Types of Tests

- Mental Ability Tests
 - Intelligence Tests
 - Aptitude Tests
 - Achievement Tests
- Creativity Tests
- Personality Tests
- Interest Inventories
- Behavioral Procedures
- Neuropsychological Tests

Intelligence Tests

- Measure an individual's ability in relatively global areas such as verbal comprehension, perceptual organization, or reasoning and thereby help determine potential for scholastic work or certain occupations.
- The term intelligence test refers to a test that yields an overall summary score based on results from a heterogeneous sample of items.

Intelligence Tests

- Measure a person's general potential to
 - solve problems
 - adapt to change
 - think abstractly
 - profit from experience

Uses of Intelligence Tests

- Measure cognitive ability.
- Ancillary uses such as
 - Clinical assessment
 - Memory
 - Brain dysfunction
 - Deterioration with age

Aptitude Tests

- Measure the capability for a relatively specific task or type of skill; aptitude tests are, in effect, a narrow form of ability testing.
- Aptitude tests are often used to predict success in an occupation, training course, or educational endeavor, such as SAT.

Achievement Tests

- Measure a person's degree of learning, success, or accomplishment in a subject or task.
- One instrument may serve both purposes, acting as an aptitude test to forecast future performance and an achievement test to monitor past learning.

Creativity Tests

- Assess novel, original thinking and the capacity to find unusual or unexpected solutions, especially for vaguely defined problems.
- Educators were especially impressed that creativity tests required divergent thinking—putting forth a variety of answers to a complex or fuzzy problem—as opposed to convergent thinking—finding the single correct solution to a well-defined problem.

Personality Tests

- Measure the traits, qualities, or behaviors that determine a person's individuality; such tests include checklists, inventories, and projective techniques such as sentence completions and inkblots.

Personality Tests

- Measure the tendency of a person to behave or respond in particular way in a given situation.
 - -**Structured** (e.g. self-report with defined response options)
 - Cattell 16PF
 - Eysenck Personality Inventory
 - California Personality Inventory
 - -**Unstructured**
 - ◇ Projective tests (e.g. Rorschach test)

Interest Inventories

- Measure an individual's preference for certain activities or topics and thereby help determine occupational choice.
- Interest tests are based on the explicit assumption that interest patterns determine and, therefore, also predict job satisfaction. For example, if the examinee has the same interests as successful and satisfied accountants, it is thought likely that he or she would enjoy the work of an accountant.

Behavioral Procedures

- Objectively describe and count the frequency of a behavior, identifying the antecedents and consequences of the behavior.
- The assumption is that behavior is best understood in terms of clearly defined characteristics such as frequency, duration, antecedents, and consequences.

Psychomotor Tests

- Test neurological and sensory functioning
 - Some require special tracking and monitoring equipment.
 - Paper and pencil tests (e.g. Bender-Gestalt).
 - Halstead-Reitan and Luria Psychomotor battery test selected aspects of neuropsychological functioning.

Neuropsychological Tests

- Measure cognitive, sensory, perceptual, and motor performance to determine the extent, locus, and behavioral consequences of brain damage.

Educational Tests

- Cognitive functioning (linguistic, quantitative, spatial and creative thinking).
- Tests of specific ability (reading ability used for diagnostic and remedial work).

Vocational Tests

- Eg. Holland Vocational preference.
- Computer packages
 SIGIPLUS (System of Interactive Guidance and Information).
 - Self-assessment
 - Practical suggestions
 - Skills
 - Preferences

Differences between Psychological Testing & Psychological Assessment

Purpose/Objective	Obtain data for use in making decisions	Arriving at a decision concerning the referral question or problem
Process	May be individual or group in nature; focuses on results of the processing	Typically individualized; focuses on how an individual processes
Role of Evaluator	Not key to the process	Assessor is key to the process of selecting evaluation tools & in drawing conclusions

Skill of Evaluator	Requires technician-like skills in administering, scoring, & interpreting test results	Requires an educated selection of tools of evaluation, skill in evaluation, and thoughtful organization and integration of data
Outcome	Yields a test score or series of test scores.	Entails a logical problem-solving approach that brings to bear many sources of data designed to shed light on a referral question
Procedural Basis	Objectivity required; quantification is real	Subjectivity in the form of clinical judgment; quantification is rarely possible

Degree Complexity	of	Simpler; involve one uniform procedure	More complex; each assessment requires various procedures (interviews, observations, etc.)
Degree Structure	of	Highly structured	Entails both structure and unstructured process
Duration		Shorter; lasting from a few minutes to a few hours	Longer; lasting from a few hours to a few days

Source of Data	The examiner	Often collateral sources
Focus	Nomothetic: how a person or group of persons compares with others how a person	Ideographic: uniqueness of a given individual, group or situation
Evaluation Results	of Relatively simple of investigation & validity based on group results	Very difficult due to variability of methods, assessors, nature of presenting questions, etc.

Who are the Parties in Assessment

- The Test developer
- The Test user
- The Testtaker/examinee

History of Psychological Assessment

- Era 1: Foundation
- Era 2: Testing Movement
- Era 3: Modern Assessment

Era I: Foundation

- Chinese Civil Service Examinations
- Middle Ages
 - “Who is in league with the devil”
 - incubi, succubi
- Darwin
 - individual differences
 - link between animals and human beings
- Galton
 - eugenics
 - correlation
- Wundt

Era 2: Testing Movement

- James Mc Keen Cattell
- Binet-Simon
- Stanford-Binet
- David Wechsler
- Army Alpha and Beta

Era 3: Modern Assessment

- Personality Tests
- Behavioral Assessment
- Neuropsychological Assessment
- Evidence-Based and Computerized Assessment

Twelve Assumptions in Psychological Testing and Assessment

- **Assumption 1: Psychological traits and states exist.**

Traits- relatively enduring patterns of behavior that may distinguish one person from another

State- relatively less enduring ...

Anxiety (as a trait and as a state)

Disposition based on a situation

Traits

- Defined based on the operational definition
 - Aggression
 - how violent an individual may be to another person
 - how persistent/motivated a person is reaching a goal

Indicators-Based on overt /observable behavior anxiety

- Who among the following can be considered the most anxious?

A -sleeps with a gun beside him that a mere noise awakens him ready to fire his gun

B – palpitates every time he is called to recite in class

C – runs away from the source of his fear



Assumption 2: Psychological traits and states can be quantified and measured.

Test item

Test score

- strength on the ability/trait or state

- general rule the higher the score the more that the test taker reflects the construct under measure (but check the trait and how it is defined)



Assumption 3: Various methods of measuring aspects of the same thing can be useful.

- Measuring behavior may be done by other methods than tests alone.

How to measure honesty?

Conscientiousness?

Openness?

Assumption 4: Assessment can provide answers to some of life's most momentous questions.

Is he going to be a good practitioner?

→ BLEPP

Must B get the promotion?

→ Interview

Is he guilty of the crime?

→ Observation of inconsistency

→ BMI

→



Assumption 5: Assessment can pinpoint phenomena that require further attention or study.

- Assessment cannot be done in one sitting and/one meeting.
- Dates of Assessment
- Assessment fee
- Name of the Institution
- Name of the Assessor

Assumption 6: Many sources of data are part of the assessment process.

In psychological assessment, data may come from:

- Clinical interviews with the client
- Psychological tests (e.g., personality, intelligence, and behavioral assessments)
- Behavioral observations
- Medical, school, or employment records
- Reports from family members, teachers, or other significant individuals
- Case history and background information

Assumption 7: Various sources of error are part of the assessment process.

Classical Test Theory



- Potential Sources of Error –
- Examiner
- Examinee
- Instrument



Assumption 8: Tests and other measurement techniques have strengths and weaknesses.

- Tests and other measurement techniques have strengths and weaknesses.

WAIS

MMPI

Rorschach Inkblot Test



Assumption 7: Test-related behavior predicts non-test-related behavior.

- Client Erases a lot while drawing a person, house or tree – perfectionist or indecision
- Gives long answers – degree of patience or cannot go direct to the point or loves to talk
- Sleepy during exam – poor test result



Assumption 10: Present-day behavior sampling predicts future behavior.

- Post-dict or predict
Narcissism –failed marriage
Will narcissism cause a failed marriage?
- It is harder to predict!



Assumption 11: Testing and assessment can be conducted in a fair and unbiased manner.

- Testing and assessment can be conducted properly or improperly.
- Test Manuals to guide proper administration, scoring and interpretation

Assumption 12: Testing and assessment benefit society.

- Tests can help us make good decision, especially the **good** ones

Test Administration

The Examiner and the Subject

- Factors influencing test performance
 - The relationship.
 - Race of the tester.
 - Language of the test taker.
 - Training.
 - Expectancy effects.
 - Reinforcement of responses.
 - Mode of administration & Computer-assisted.
 - Person variables.



Behavioural Assessment Methodology

- Reactivity.
- Drift.
- Expectancies.
- Halo effect.
- Rating accuracy.

Reactivity

- The phenomenon that occurs when individuals alter their performance or behavior due to the awareness that they are being observed
- *Hawthorne effect* is when subjects' behavior is altered by being observed.

Drift

- Gradual step by step alterations over time in the observations made by a specific viewer
- Retraining (after 3 years)
- *The Flynn effect refers to the consistent upward drift in IQ test scores across generations which has been documented to be approximately 3 points per decade.*

Expectancies

- A type of reactivity that occurs in scientific experiments when a research subject expects a given result and therefore unconsciously affects the outcome or reports the expected result
- *Rosenthal effect* is when the outcome of a study is influenced by the experimenter's expectations

Halo Effect

- The tendency for an impression created in one area to influence the opinion in another area
- Halo effect
 - pretty, tall, neat **therefore**, intelligent
- Horn effect
 - rude, dark-complexioned **therefore** sinful

Rating accuracy

- Leniency
- Severity
- Central tendency error

W/c rating error will yield a negative skewness?