PTEC 155- DEVELOPMENTAL DISABILITIES

MODULE 43

TESTS AND MEASUREMENTS
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INTRODUCTION

Psychological tests and measurements are procedures used to assist in establishing a working diagnosis and, therefore, provide the necessary information for planning a treatment program. There are a variety of tests used to assess the clients. Psychological testing is one type.

The psychological tests described in this module represent the major assessment tools used in the field. This module, therefore, is designed to assess your competency in the content area--tests and measurements. The successful candidate must achieve a passing score on a written, comprehensive examination covering knowledge of test procedures and instructions used in diagnosing and assessing the developmentally disabled and mentally disabled clients.

The candidate is invited to read through the expected competencies and the designated reading materials. The study guides should be especially helpful. The candidate is encouraged to learn the vocabulary and definitions to gain an understanding of the “language” of the module.
OBJECTIVES

THEORY: The successful student will achieve a passing score on a written comprehensive examination based on materials dealing with techniques used to teach and train clients with developmental disabilities in the areas of feeding, positioning, and using orthotic equipment.

ASSESSMENT: There will be a written comprehensive objective type test; multiple choice, true/false, and matching questions.

MAKE UP TESTS MAY BE AN ESSAY TEST!!

INSTRUCTIONAL MEDIA: Study Guides

1. Test Instruments – Uses and Limitations
2. Introduction to Psychological Tests and Measurements
3. Intelligence Testing – General Information
4. Adaptive Behavior Tests
5. Children’s Apperception Tests
6. Achievement Tests
7. Vocational Aptitude Tests
8. Organic Brain Impairment Tests
9. Miscellaneous Testing Material & Other Tests

Text: Beirne-Smith: Chapter 3
OBJECTIVES

The successful student will be able to:

1. Identify basic concepts related to the purpose and structure of various test instruments.
   a. Identify the use of test instruments
   b. Select from a list the limitations of tests and measurements.
   c. Identify the purpose and use of test manuals.
      (1) Define validity
      (2) Define reliability
      (3) Distinguish between norm and criteria reference tests.
   d. Distinguish between cognitive and affective tests and identify an example of each.
   e. Identify the area tested with “intelligence” tests and identify:
      (1) Uses of the tests
      (2) Weaknesses of the tests

2. Identify three purposes of assessment testing with the mentally disabled/disturbed individual.
   a. Select from a list three criteria used to evaluate psychological tests.
   b. Identify the six categories of psychological and physical assessment testing.

3. Identify components of measuring “intelligence.”
   a. Identify the correct formula for obtaining the measurements of IQ ratio.
   b. Match the terms associated with categories of intelligence with their appropriate IQ numerical range from 0-130.
c. Identify four reasons for using intelligence testing.

d. Identify the individuals best served by the use of the Stanford-Binet Test.

e. Identify the age group served by each of the following intelligence tests:

(1) WISC (Wechsler Intelligence Scale for Children)

(2) WAIS (Wechsler Adult Intelligence Scale)

(3) WPPSI (Wechsler Preschool and Primary Scale of Intelligence)

f. Identify the use of the Peabody Picture Vocabulary Test.

g. Identify the method by which the Peabody Picture Vocabulary Test is administered.

4. Define the term adaptive behavior.

a. Identify the purpose of the American Association of Mental Deficiency Adaptive Behavior Scale (AAMD ABS), Part I.

b. Identify five of the ten domains used in Part I of the American Association of Mental Deficiency Adaptive Behavior Scale (AAMD ABS).

c. Identify the purpose of the American Association of Mental Deficiency Adaptive Behavior Scale (AAMD ABS), Part II.

d. Identify five domains of behavior related to personality and behavior disorders as used in Part II of the American Association of Mental Deficiency Adaptive Behavior Scale.

e. Identify the use of the Vineland Social Maturity Scale.

f. Identify five of the eight categories of behavior used in assessment of the Vineland Social Maturity Scale.
5. Identify the two basic types of personality tests and the specific tests or techniques under each category.
   
a. Select two areas that are assessed by personality tests.
   
b. Choose two identifying characteristics of the MMPI (Minnesota Multiphasic Personality Inventory).
   
c. Identify two characteristics of the Rorschach method.
   
d. Identify the procedure used in the administration of the Thematic Apperception Test (TAT) and the Children's Apperception Test (CAT).
   
e. Identify four other projective techniques used in assessing personality.

6. Identify the function of the Wide Range Achievement Test.

7. Identify the four aptitudes and abilities measured by vocational aptitude tests.
   
a. Identify the purpose of vocational interest tests.
   
b. Identify two interest tests.

8. Identify how each of the following is used to assess organic brain impairment:
   
a. Visual Bender Gestalt
   
b. Brain scanning
   
c. EEG (Electroencephalogram)
PRINCIPLES

1. Tests of intelligence reflect competencies and achievements rather than specific measurable “intelligence.” These skills are considered important for success in the culture.

2. Psychological tests and measurements assist in providing data to the baseline assessment of the client.

3. Psychological tests are instruments used to obtain information in controlled situations.

4. Adaptive behavior is the ability of the individual to meet the standards of self-sufficiency and social responsibility expected by his/her culture.

5. Apperception refers to those mental processes in which an experience, sensation, or perception is brought into relationship with already existing ideas.

6. Achievement is the measurement of the individual’s progress in mastering a subject or skill.

7. Gestalt is a structure, configuration, or pattern of physical, biological, or psychological phenomena so integrated as to constitute a functional unit with properties not derivable from its parts in summation.

8. Much of one’s behavior is observable and measurable.
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<tr>
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<th>OBJECTIVE 43.4</th>
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<td>Dynamic</td>
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<td>Hypochondriasis</td>
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<td>Objectivity</td>
<td>Hypomania</td>
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<td>Chronological age</td>
<td>Perception</td>
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<td>Comprehension</td>
<td>Personality</td>
</tr>
<tr>
<td>Intelligence</td>
<td>Projective</td>
</tr>
<tr>
<td>Intelligence quotient</td>
<td>Psychopathic deviate</td>
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<td>Mental age</td>
<td>Schizophrenia</td>
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<td>Receptive vocabulary</td>
<td><strong>OBJECTIVE 43.5</strong></td>
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<td><strong>OBJECTIVE 43.3</strong></td>
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<td>Aptitude</td>
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<td>Domain</td>
<td><strong>OBJECTIVE 43.7</strong></td>
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<td>Locomotion</td>
<td>Differentiating</td>
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<td>Social adaptation</td>
<td>Gestalt</td>
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<tr>
<td><strong>OBJECTIVE 43.4</strong></td>
<td><strong>Hypothesis</strong></td>
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<tr>
<td>Apperception</td>
<td>Intellectual deficit</td>
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<tr>
<td>Depression</td>
<td>Lesion</td>
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<tr>
<td>Dissimulation</td>
<td></td>
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STUDY GUIDE 1
TEST INSTRUMENTS – USES AND LIMITATIONS

We are constantly taking tests. As young children, some of us were given “intelligence” tests, and on the basis of these results, our classes and educational tracts were determined. There is a prevailing tendency to look at test results as firm, conclusive data. However, it must be remembered that test results are general indicators for potential or attained skills and abilities.

Basically, there are two types of ability testing instruments. The cognitive type is an objective-type test, which generally measures a person’s ability to select the correct answers to test items. The cognitive type of test is also referred to as an achievement test or ability test. Intelligence tests, such as the Otis, Wechsler, and Stanford-Binet, assign a numerical value to the results of the test using a formula as follows:

\[
\text{Mental Age (MA)} \times \frac{100}{\text{Chronological Age (CA)}} = \text{Intelligence Quotient (IQ)}
\]

The second type of test is the affective type. This type of instrument is protective in nature in that it demonstrates attitudes and knowledge. The test taker does this by completing sentences or by looking at a picture and telling a story from one’s own point of view. The Kuder and the Thematic Apperception Test (TAT) are examples of affective-type tests.

These tests are difficult to score because of the subjectively involved. Therefore, the health care worker is reminded of the importance of knowing the intent and purpose of each testing instrument. Nonetheless, these tests can be useful as broad screening tools.

When it is desirable to use a testing instrument to evaluate the status of a client. The test manual developed by the test writers should be studied carefully to assess whether or not it is an appropriate tool for the intended purpose. Commercially prepared tests will all have explanatory manuals describing the intent and purpose of the examination, the norm reference\(^1\), validity\(^2\), and reliability\(^3\) data.

\(^1\)Norm reference is the score compared with the scores of the average others of the same age, sex, educational background, etc.

\(^2\)Validity is the extent to which it measures what it is intended to measure expressed as a numerical value.

\(^3\)Reliability is the extent of how consistent a test is in measuring what it is to measure expressed as a numerical value.
STUDY GUIDE 2
INTRODUCTION TO PSYCHOLOGICAL TESTS AND MEASUREMENTS

The process of evaluating the individual client demands that health care personnel employ several methods. The major methods of evaluating a client are physical examination and laboratory tests, interviews, observations of behavior, and psychological tests. Some methods contribute data the client cannot supply through self-report, such as physical examination and laboratory tests. Other methods, such as interviews and personality tests, provide information the client could supply if he/she was extremely insightful and free of required defenses.

A function of evaluation is to provide an accurate description of the client in order to implement the best plan of intervention (treatment). Diagnostic evaluation often provides important clues to predicting the client’s response to psychotherapy. Psychological testing can sometimes help determine whether a disorder is organically or psychologically based.

A psychological test may be defined as an instrument for obtaining data under controlled, standard situations. It is a sample of behavior under conditions that are unrelated to that individual’s experience and environment from which inferences may be made about other behaviors.

A number of psychological tests exist and generally fall into one of six categories. Three of these, intelligence tests, intellectual impairment tests, and personality tests, are utilized in different areas: schools, developmentally disabled facilities, mental health units, and other out-patient facilities.

The other three types of tests are also used in evaluation: interest and special aptitude, achievement, and adaptive behavior. These tests are used in vocational guidance, schools, developmentally disabled facilities, and the counseling of clients in different areas.
STUDY GUIDE 3
INTELLIGENCE TESTING – GENERAL INFORMATION

1. **Intelligence Scale: Ranges and Classifications**

<table>
<thead>
<tr>
<th>Range</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>130 and above</td>
<td>Very superior</td>
</tr>
<tr>
<td>120 – 129</td>
<td>Superior</td>
</tr>
<tr>
<td>110 – 119</td>
<td>Bright – normal</td>
</tr>
<tr>
<td>90 - 109</td>
<td>Average (Normal)</td>
</tr>
<tr>
<td>80 - 89</td>
<td>Dull – Normal</td>
</tr>
<tr>
<td>70 - 79</td>
<td>Borderline</td>
</tr>
<tr>
<td>52 - 69</td>
<td>Mildly retarded</td>
</tr>
<tr>
<td>35 - 54</td>
<td>Moderately retarded</td>
</tr>
<tr>
<td>20 - 39</td>
<td>Severely retarded</td>
</tr>
<tr>
<td>0 - 24</td>
<td>Profoundly retarded</td>
</tr>
</tbody>
</table>

2. **Intelligence Quotient Formula:**

   The intelligence quotient is a numerical ratio which indicates a person’s measured level of intelligence. It is the mental age as shown by the intelligence tests divided by the chronological age and then multiplied by 100.

   \[
   \frac{\text{MA (Mental Age)}}{\text{CA (Chronological Age)}} \times 100 = \text{IQ (Intelligence Quotient)}
   \]

3. **Adult Intelligence Measurements:**

   An intelligence quotient (IQ) of 100 is considered within average or normal range. The average range, 90 to 110 IQ represents 50 percent of the population.
4. **Vocabulary Test: Peabody Picture**

Many of the presently available standardized language tests require specialized clinical training for proper administration and interpretation. The Peabody Picture Vocabulary Test is one of the more widely used tests, which assesses spoken language skills; however, specialized clinical training is not required.

The purpose of this test is to measure single-word receptive vocabulary in children of ages two years, three months to eighteen years, five months. The test consists of 150 plates, each containing four pictures. The examiner orally provides a stimulus word, and the child indicates the picture, which best represents, the stimulus words. Scores may be converted to mental age, IQ, and percentile equivalents.

![Sample item from the Comprehensive Test of Nonverbal Intelligence](image)
Vineland Social Maturity Scale (VSMS)

The Vineland Social Maturity Scale was developed to assess social competency. It attempts to determine the degree to which the child at certain ages has mastered skills expected in the family and community. For example, “Can he/she tie own shoelaces? Can he/she count change?” Major emphasis is on self-reliance and social responsibility.

The VSMS consist of eight categories of behavior:

1. General self-help
2. Self-help in dressing
3. Self-help in eating
4. Communication
5. Self-direction
6. Socialization
7. Locomotion
8. Occupation

The earlier age levels are heavily weighted with self-direction, socialization, and occupation items.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Subdomain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Receptive</td>
</tr>
<tr>
<td></td>
<td>Expressive</td>
</tr>
<tr>
<td></td>
<td>Written</td>
</tr>
<tr>
<td>Daily Living Skills</td>
<td>Personal</td>
</tr>
<tr>
<td></td>
<td>Domestic</td>
</tr>
<tr>
<td></td>
<td>Community</td>
</tr>
<tr>
<td>Socialization</td>
<td>Interpersonal Relationships</td>
</tr>
<tr>
<td></td>
<td>Play and Leisure Time</td>
</tr>
<tr>
<td></td>
<td>Coping Skills</td>
</tr>
<tr>
<td>Motor Skills</td>
<td>Gross</td>
</tr>
<tr>
<td></td>
<td>Fine</td>
</tr>
</tbody>
</table>
The term adaptive behavior refers to the effectiveness and degree with which the individual meets the standard of self-sufficiency and social responsibility expected of his/her age and cultural group.

Social competency is an extension of the biological concept that if the biological organism does not adapt, it will not continue to survive. It is necessary for the organism to adapt both cognitively and socially to the social environment if he/she is to be rewarded for his/her behavior.

**American Association on Mental Retardation Adaptive Behavior Scale (AAMR ABS)**

The American Association of Mental Deficiency Adaptive behavior Scale (AAMR ABS) is a comprehensive, professional instrument, which measures social adaptation. This test contains two major parts, Part I and Part II.

**Part I:** consists of items that are used to evaluate developmental skills in ten domains related to independent functioning in daily living. These ten domains are then subdivided into twenty-one domains.

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>SUBDOMAINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Independent functioning</td>
<td>Eating, Toilet use, Cleanliness, Appearance, Care of clothing, Dressing and undressing, Travel, General independent functioning</td>
</tr>
<tr>
<td>2. Physical development</td>
<td>Sensory development, Motor development</td>
</tr>
<tr>
<td>3. Economic activity</td>
<td>Money handling and budgeting, Shopping skills</td>
</tr>
<tr>
<td>4. Language development</td>
<td></td>
</tr>
<tr>
<td>5. Numbers and terms</td>
<td>Expression, Comprehension, Social language development</td>
</tr>
<tr>
<td>6. Domestic activity</td>
<td>Cleaning, Kitchen duty, Other domestic activities</td>
</tr>
<tr>
<td>7. Vocational activities</td>
<td></td>
</tr>
<tr>
<td>8. Self-direction</td>
<td>Initiative, Perseverance, Leisure time</td>
</tr>
<tr>
<td>9. Responsibility</td>
<td></td>
</tr>
<tr>
<td>10. Socialization</td>
<td></td>
</tr>
</tbody>
</table>
Part II: of the Adaptive Behavior Scale assesses the extent to which the retarded person displays maladaptive behavior. Although Part II questions how the subject adapts to his/her particular environment, it does not appraise the environment per se, and no adjustment for the complexity of the environment is made. This is a definite weakness in the test. See the domains of behavior related to personality and behavioral disorders used in Part II listed below.

**AAMR ABS: Part II**

1. Violent and destructive behavior
2. Antisocial behavior
3. Rebellious behavior
4. Untrustworthy behavior
5. Withdrawal
6. Stereotyped behavior and odd mannerisms
7. Inappropriate and interpersonal manners
8. Unacceptable vocal habits
9. Unacceptable or eccentric habits
10. Self-abusive behavior
11. Hyperactive tendencies
12. Sexually aberrant behaviors
13. Psychological disturbances
14. Use of medications

The AAMR ABS is administered in one of two ways. It can be completed with a person familiar with the client, or information can be obtained informally in an interview.
Apperception is a psychological term that refers to the final stage of perception. Apperception is also a general term for those mental processes in which an experience, sensation, or perception is brought into relationship with already existing ideas and is thereby understood. Apperception tests deal with thought processes, not behaviors.

Children’s Apperception Test is a projective method of investigating personality – studying the dynamic meaningfulness of individual differences in the perception of standard stimuli. The recommended use of the CAT is with children between the ages of three and ten. It was designed to facilitate understanding of a child’s relationship to important figures and drives. Pictures are presented to the child for his/her interpretation; the child tells a story about the picture. The ten pictures presented are designed to elicit: (1) responses to feeding problems – specifically; oral problems – generally, (2) problems of sibling rivalry, (3) attitude toward parental figures and the way in which these figures are apperceived, and (4) child’s relationship to parents as a couple. The test also attempts to elicit the child’s fantasies about aggression, about his/her acceptance by the adult world, and about his/her fear of being alone at night with a possible relation to masturbation, toilet-training, and the parents handling of and response to the fear.

The CAT attempts to learn about the child’s structure, defenses, and his/her dynamic way of reacting to and handling own problems of growth. The CAT may be clinically useful in determining what dynamic factors might be related to the child’s behavior in a group, in a school, or to events at home. It may be used directly in therapy as a play technique. It is also useful as a tool in facilitating longitudinal research studies on child development.
Achievement tests are similar to tests of learning ability. **Achievement tests** measure learning accomplished over a short period of time, whereas **ability tests** measure learning which has occurred over a lifetime. An achievement test is usually designed to measure whether a student has learned the objective previously set up by the teacher.

The **Wide-Range Achievement Test** provides scores in reading – “recognizing and naming letters and pronouncing words.” **Spelling** – “copying marks resembling letter, writing the name, and writing single words to dictation,” and **arithmetic** – “counting, reading number symbols, solving oral problems, and performing written computations.” The 1965 edition is now divided into two levels: Level 1 for ages 5 – 11; Level II for ages 12 and over.

In summary, this achievement test is a unique, individually administered test. A psychologist, as a clinical tool in determining quickly the individual’s general ability, level and educational background best uses the test.
STUDY GUIDE 7
VOCATIONAL APTITUDE TESTS

Vocational Aptitude and Interest Tests are used to assist the client with problems involving vocational choices, vocational maladjustment, and vocational dissatisfaction.

VOCATIONAL INTEREST TESTS

Strong Vocational Interest Blank (SVIB)

When using this particular interest test, scores for over 50 occupational areas can be identified. The scoring keys were developed by studying the responses of persons successfully engaged in a specified occupation and then contrasting their item statistics with those obtained from a sample of men and women in general.

Items that reveal clear and significant differences are selected and marked for scoring to stress the responses actually given by individuals in that particular occupation. The test scores of a person who takes the SVIB are entered on a profile sheet that provides letter grade equivalents of “A,” “B,” and “C.” These letter ratings are indications of the correspondence between a person’s interest and those of persons in the occupational fields; they do not necessarily indicate anything about his/her aptitudes for the work in those fields.

The profile sheet also provides for the listing of several other scores besides those directly pertaining to a specific occupation.

1. The occupational-level scale reflects differences between interests of unskilled and semi-skilled workers on that one hand and those of business and professional men on the other.

2. The interest-maturity scale was based on a contrast between males of age 15 and those of 25.

3. A specialization-level scale reflects interest characteristic of medical specialists and of research workers in other scientific fields.

4. Finally, a masculinity-femininity scale shows the degree of similarity between the person’s interests and those characteristics of men or of women, respectively.

Kuder Preference Record

This test also yields scores indicative of occupational interests. The vocational form of the test includes 168-item triads describing three different activities or interests. The respondent selects in each triad the one he/she likes most and the one he/she likes least. Ten basic interest scales are used: (1) outdoor, (2) mechanical, (3) computational, (4) scientific, (5) persuasive, (6) artistic, (7) literacy, (8) musical, (9) social service, and (10) clerical. A profile record sheet provides for an automatic conversion of raw scores to percentiles, and the profile pattern gives a visual picture of the high, average, and low rankings of the ten categories.
APITUDE TESTS

Differential Aptitude Tests and the General Aptitude Test Battery

These tests measure general and specific aptitudes such as clerical speed and accuracy, mechanical comprehension, and form-perception ability. It is important to remember that aptitudes can be developed if desired. Tests of special abilities are the Minnesota Clerical Aptitude Tests and the Bennet Mechanical Comprehension Test. Test of skill and achievement, particularly academic achievement, include the Cooperative Achievement Test and the Iowa Test of Educational Development.
STUDY GUIDE 8
ORGANIC BRAIN IMPAIRMENT TESTS

Bender Visual Motor Gestalt

Gestalt psychology has given a new impetus to the field of psychology. It has given us a new understanding of the relationship between the whole and its parts. This theory places emphasis on the perceptive process, and stresses the total reaction to the total situation.

The Visual Motor Gestalt Test developed by Dr. Lauretta Bender uses the Gestalt Theory by having the individual not only describe what he perceives, but draw what he perceives. It approaches the fundamental problems of perception and action from a new angle. It shows the primitive forms of experience and the maturation process in the course of development. It also demonstrates the continuous interplay between motor and sensory factors. The Bender Gestalt also gives a correct estimate of visual motor development, which in general is parallel with the mental development of the child. It also helps in determining various types of developmental disturbances and assists in differentiating various forms of mental deficiency.

The Bender Visual Motor Gestalt is the most frequently used test in measuring organic brain impairment. This test consists of nine simple geometric designs. Each design is present individually, and the subject is requested to make freehand copies on plain white paper. Individuals with certain types of organic brain impairments may display one or more of the following behaviors: (1) incorrectly rotate designs, (2) incorrectly copy angles, and (3) perseverance in copying certain dot patterns. A variety of other signs may also be evident. This test can be used with young children in order to identify neurologically underdeveloped children who are in need of special instructional services.

Brain Scanning

Scanning means recording on a photographic plate the emission of radioactive waves from a specific substance injected into the body. The radioactive agent selected is one that will be concentrated in a specific tissue, such as the liver, thyroid, or brain.

Brain scanning is well accepted in the diagnosis of clients suspected of mass lesions of the brain, or more specifically, tumors or abscesses.

The physiological mechanism upon which brain scanning is based is that normal brain tissue is relatively impermeable to most substances. In contrast, radioactive tracers readily diffuse into lesions, such as brain tumors; therefore, these lesions can be seen against the relatively low activity in the surrounding brain.

In addition to detecting the presents of the lesion, multiple views make it possible to characterize its size, shape, and position. Scanning also helps in the diagnosis of cerebral thrombosis, subdural hematoma, epilepsy, and cerebral contusions.
Electroencephalogram (EEG)

The electroencephalogram records the electrical activity of the brain. This test is used as a diagnostic technique for epilepsy and convulsive disorders and also in localizing lesions in the cerebrum. This test is not always considered accurate because some individuals with intracranial disease will have a normal EEG, while others no demonstrable disease will have an abnormal reading.
The development of psychological measurement of human characteristics has provided many tools that are of particular value in psychiatric assessment.

A. Variability from person to person is a commonly acknowledged aspect of many characteristics of human behavior. Psychological testing is based on the assumption that differences in these characteristics can be measured.

B. Technically, a test is a systematic procedure of obtaining samples of behavior for the comparison of two or more persons.

C. The development, administration, and interpretation of the tests most widely used in psychiatric assessment require special skill and training. The American Psychological Association has established ethical standards for the distribution and use of psychological tests.

D. Criteria for evaluation of psychological tests: While psychological tests vary in content, purpose and range of application, the evaluation of tests should consider the following characteristics:

1. Reliability: Refers to the consistency with which a test measures what it proposes to measure

2. Validity: Refers to the accuracy with which a test fulfills its purpose of prediction, selection, or classification

3. Standardization: Refers to the establishment of norm groups which permit the comparison of an individual test result to an appropriate reference group

E. Other characteristics of tests:

1. Form of administration: Some tests can be administered to only one person at a time (individual tests); others can be given to any number of persons at one time (group tests)

2. Standardization of administration: Tests vary in the degree to which the tester must follow a prescribed procedure in the administration of the test

3. Objectivity: Tests vary in the degree to which interpretation is required in the scoring of responses. An objective test is one, which is scored in a standardized way which minimizes differences among different scorers

4. Form of response: Some tests require a specific form of response (e.g., true-false); others permit open-end responses (e.g., sentence completion)

F. Commonly used tests in psychiatric assessment:
1. Intelligence tests:
   a. The “intelligence” measured by intelligence tests is considered to be a general, relatively stable capacity to learn and deal effectively with one’s environment.
   b. Intelligence is assumed to be normally distributed in the population.
   c. The results of intelligence tests are frequently reported in terms of an IQ (Intelligence quotient) score.
   d. The IQ score indicates the position of a person’s intelligence test performance relative to the average performance of his age group. The average IQ is 100.
   e. The commonly used classification of intelligence is as follows: Very Superior — IQ 130 and above; Superior — 120 – 129; Bright — Normal 110 – 119; Average 90 – 109; Dull-Normal 80 – 89; Borderline — 70 – 79; Mental Defective — 69 or below.
   f. In psychiatric practice, the intelligence test has the following main uses:
      (1) To aid in establishing the diagnosis of mental retardation.
      (2) To assess the effects of brain damage.
      (3) To assess effective intellectual performance in psychiatric disorders.
      (4) To define a patient’s intellectual resources for educational and vocational adjustment.
   g. Since “intelligence” is, to a substantial degree defined culturally, tests of intelligence reflect competencies and achievements which are considered important for success in the culture; interpretations of tests results should be made with full consideration of appropriateness of the test for the particular person who is tested.
   h. Major intelligence tests in current usage:
      (1) The New Revised Stanford-Binet (1960) is a widely used, individually administered intelligence test for children and for the assessment of mental retardation, and has served as the standard for comparison with other tests of intellectual ability.
         (a) The test is composed of various tasks and problems organized by year levels arranged from two years to superior adults.
         (b) The problems successfully solved at each year level are totaled and the sum is expressed as a Mental Age Score and has an IQ score equivalent.
Examples of types of tasks included are vocabulary, memory span for digits, words, and sentences, reasoning, comprehension, copying geometric figures, etc.

Verbal ability is strongly emphasized in this test, and it has proved useful in the prediction of school achievement.

The test is of limited usefulness with adults because it was standardized primarily with children and is composed of tasks which are more appropriate for children.

It is the test of choice for reliable assessment of the extreme ranges of intelligence, both low and high.

The Wechsler Adult Intelligence Scale (WAIS) is the most widely used individually administered intelligence test for adults and is the standard against which other adult intelligence tests are compared.

The test is composed of a series of subtests organized into a Verbal Scale and a Performance Scale. The verbal subtests are Information, Comprehension, Similarities, Arithmetic, Digit Span, and Vocabulary. Performance subtests are Picture Arrangement, Picture Completion, Block Design, Object Assembly, and Digit Symbol.

The test yields three IQ scores: Verbal Scale IQ, Performance Scale IQ, and Full Scale IQ.

Differences between verbal and performance IQ scores may sometimes be of diagnostic value. However, differences in the pattern of subtest scores have not proved to be of any consistent diagnostic significance.

Two other forms of the Wechsler Intelligence Scale exist: Wechsler-Bellevue Form I (which is now rarely used) and Wechsler-Bellevue Form II which is the retest instrument for the WAIS.

Two forms of the test have also been developed for children. The Wechsler Intelligence Scale for Children (WISC) is designed for children ages five to fifteen, and is the most widely used intelligence test for children. The Wechsler Pre-School and Primary Scale of Intelligence (WPPSI) has been developed for children ages four to six and one-half.

Special individually administered intelligence tests have been devised for use with illiterate, blind, deaf, and other handicapped persons who would not be accurately tested on the standard test.
2. Personality Tests

a. There is a great variety of personality measures which differ in form, content, and interpretation

b. Some personality measures attempt to assess personality traits or characteristics: others attempt to reveal a pattern of personality dynamics (motives, defenses, conflicts, etc.)

c. Personality measures can be classified roughly as objective tests and as projective techniques

(1) Objective tests

(a) Objective tests usually take the form of questionnaires or rating scales in which the patient respond to he items according to how characteristic they are of his experience and behavior

(b) Tests are administered and scored in a standardized way with the results expressed in numerical scores

(c) Since objective tests are a form of self-report, they are open to faking and dissimulation. Ease of administration permits testing of large numbers of persons in away which does not require special clinical personnel

(d) The Minnesota Multiphasic Personality Inventory (MMPI)

i. This is the most widely used objective personality test in psychiatric practice

ii. The MMPI consists of 550 true-false items

iii. Validity scales: Four special scales are scored which indicate response tendencies and test-taking attitudes which might make interpretations of the test doubtful

iv. Clinical scales: Responses are scored in terms of correspondence to the responses of diagnosed psychiatric groups (hypochondriasis, depression, hysteria, psychopathic deviate, masculinity-femininity,
paranoia, psychasthenia, schizophrenia, hypomania, and social introversion)

v. In addition to the clinical scales, many research scales have been developed for special purpose or to measure other personality characteristics (e.g., dependency, ego-strength, etc.)

vi. Interpretation of the test is based on the pattern of scale scores. In recent years, standardized interpretations have been developed for common patterns. Computer systems have been devised which not only score the test, but can produce analyses of profiles.

vii. A sizable research literature (more than 3,000 articles and books) has been developed around the MMPI. Reviews of this literature indicate that this test is reliable and valid for many uses.

(2) Projective techniques

(a) Characteristics of projective measures

i. The materials of most projective methods are unstructured or ambiguous and require that the patient organize them in some imaginative way. The term “projective” implies that the patient “projects” his personality into the responses he gives.

ii. The patient has considerable freedom in his response.

iii. It is assumed that the way in which the patient responds reveals emotional and motivational factors which are characteristic of him, though perhaps on an unconscious basis.

iv. Interpretation of responses is subjective and is usually based on the theoretical assumptions of the interpreter. This leads to a lower degree of consistency from interpreter to interpreter than is obtained with objective tests.

v. Both the administration and interpretation of projective techniques require special training and experience.

(b) The Rorschach Method
The Rorschach is the best known and most widely used of the projective techniques.

The materials consist of ten “ink blots.” The patient is asked to describe what each card looks like. He may give as many responses to each card as he can.

Following this administration of the test, the examiner conducts an inquiry, asking the subject to indicate the location of each response and to tell what about the blot (e.g., shape, color, and/or texture) contributed to the response.

Responses are scored according to content (e.g., human, animal, object, X-ray, etc.), the area of the blot included in the content (whole blot or a particular section of it), and the characteristics of the blot (e.g., color, shading, and shape) which determine the content.

Interpretation is based on assumed personal significance of the responses, as well as characteristic ways in which the patient organizes his responses. A developing theory of Rorschach responses relates such factors as the use of color and the interpretation of movement to forms of psychopathology. Interpretation rests heavily on psychoanalytic theory, especially Jungian Theory.

A tremendous literature (more than 3,000 articles and books) pertaining to the Rorschach has developed. Reviews of this literature consistently raise serious questions about the reliability and validity of this instrument.

The Thematic Apperception Test (TAT)

This procedure consists of twenty illustrations. The patient is asked to tell a story about the content of each picture.

Several complete methods of scoring have been developed which require special training in their use.

Stories are interpreted in terms of their themes, the handling of motivational states, and the resolution of conflicts, the ways in which interpersonal relations are presented, and the extent to which the patient identifies himself with the characters he describes.
d. Other projective techniques: A large number of other techniques involving word association, sentence completion, drawing, and storytelling have been devised. They have in common the assumption that imaginative productions and fantasy yield important clues to personality organization.

3. Vocational Interest and Aptitude Tests
   a. Since the problems faced by some patients involve vocational maladjustment and dissatisfaction, vocational testing can contribute important information to a total treatment program.
   b. Aptitude tests
      (1) Tests are available which measure a variety of special aptitudes and abilities such as clerical ability, mechanical ability, spatial reasoning, hand and finger dexterity, and rate of manipulation.
      (2) Norms permit comparison of individual scores with scores of representative occupational groups.
      (3) The assessment of aptitudes for professional and managerial occupations is more complex and involves also the measurement of a combination of intellectual, personality, and interest factors.

4. Brain Damage Tests
   a. The assessment of intellectual deficit and the differentiation of organic brain conditions is often a problem in psychiatric diagnosis.
   b. The most accurate assessment of deficit due to brain damage can be made if earlier test performances are available with which comparisons can be made. In practice, this is seldom possible.
   c. Some tests have been developed which compare performance on tasks sensitive to brain damage (e.g., abstract reasoning) with performance on tasks less affected by brain damage (e.g., vocabulary).
   d. Other tests have been designed which assess specific aspects of brain function such as memory, perception, language use, and motor coordination.
   e. At present, tests of brain damage sometimes yield helpful diagnostic hypotheses. However, the eventual utility of tests of specific brain function is dependent on the success of current coordinated research into the neurological and behavioral correlates of brain activity.
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**Definition of Mental Retardation**

- Sub average intellectual functioning
- IQ < 70
- Limitations in two or more adaptive daily life skill areas (conceptual, practical, and social intelligence)
- Manifests before age 18
- Reflects the “fit” between the capacities of an individual and the expectations of the culture

Slide 7

**Definition of Intelligence**

- Ability to learn
- Cope with changing conditions
- Motivation to complete task
- Practical — competence in the every day world
- Social — appropriate social and interpersonal interactions

Slide 8

**Purpose of Tests and Measurements**

- Assist in establishing a working diagnosis
- Assess for brain damage and its effects
- Provide necessary info (baseline data) for development of a treatment program
- General indicators for potential or attained skills
- Difficult to score due to subjectivity and reliability
Important principles when developing a treatment plan

- Apperception - thought processes in which new experience is brought into relationship with existing ideas
- Valid assessment - considers cultural and linguistic diversity as well as behavioral, communication, and physiological factors
- Limitations and strengths in adaptive skills often coexist
- Client's skills can improve with appropriate individualized supports

Valid Assessment

- Reliability ~ consistency in what a test is measuring; (test will always measure intelligence)
- Validity ~ accuracy to which a test fulfills its purpose; (accurately measures intelligence)
- Bias ~ people with certain characteristics score consistently score differently
- Objectivity ~ minimizes differences among different scorers
- Labeling: people perform to expectations

6 categories of tests

- Intelligence: Stanford-Binet for children, WAIS for adults
- Intellectual impairment: Bender Visual Motor Gestalt, brain scan, EEG
- Personality: MMPI objective type, Rorschach projective type (ink blot)
- Special aptitude: Vineland Social Maturity, CDERS
- Achievement: SAT, Wide Range
- Adaptive behavioral: AAMR ABS
Adaptive skills definition

The effectiveness and degree with which an individual meets the standard of self-sufficiency and social responsibility expected of his/her age and cultural group.
**Adaptive skill areas**
- Communication
- Community use
- Home living
- Social skills
- Functional academics
- Self direction
- Health and safety
- Self-care
- Leisure
- Work

**Adaptive behavior assessment**
- Combine with intelligence testing for a more complete assessment
- Daily functions related to self-care, interactions with others, participation in the community
- Includes both ability and performance
- Should include all adaptive living domains
- Functional analysis – observations in the natural environment
- Structured observations – focus on target behaviors

**Personality test MMPI**
- Clinical Scales
  - Schizoid
  - Avoidant
  - Dependent
  - Histrionic
  - Narcissistic
  - Antisocial
  - Aggressive/sadistic
  - Compulsive
  - Passive/aggressive
  - Self-defeating
Vocational aptitude tests

- Measures the following skills
  - clerical ability
  - mechanical ability
  - spatial reasoning
  - hand and finger dexterity
  - rate of manipulation

Intelligence scale $MA/CA = IQ$

- 130 and above: very superior
- 120-129: superior
- 110-119: bright-normal
- 90-109: average
- 80-89: dull-normal
- 70-79: borderline
- 52-69: mild retardation
- 36-54: moderate
- 20-38: severe
- 0-24: profound
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