

Chapter 3

Clinical Assessment and Diagnosis

Research Methods

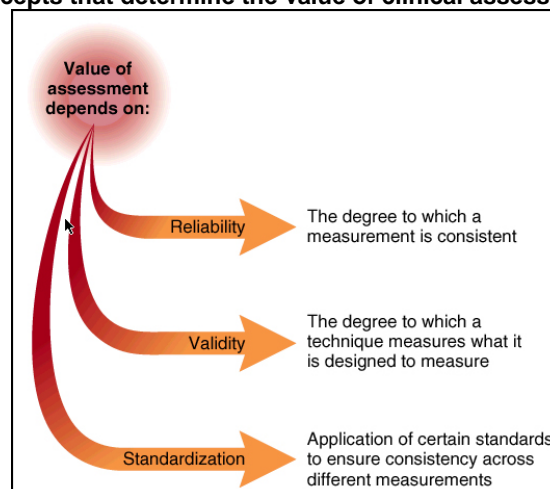
Assessing Psychological Disorders

- Purposes of Clinical Assessment
 - To understand the individual
 - To predict behavior
 - To plan treatment
 - To evaluate treatment outcome
- Analogous to a Funnel
 - Starts broad
 - Multidimensional in approach
 - Narrow to specific problem areas

Key Concepts in Assessment

- Reliability
 - Consistency in measurement
 - Examples include test-retest and inter-rater reliability
- Validity
 - What an assessment approach measures and how well it does so
 - Examples include concurrent, discriminant, and predictive validity
- Standardization
 - Standards and norms help ensure consistency in the use of a technique
 - Examples include structured administration, scoring, and evaluation procedures

Concepts that determine the value of clinical assessments



Domains of Assessment: The Clinical Interview and Physical Exam

- Clinical Interview
 - Most common clinical assessment method
 - Structured or semi-structured
- Mental Status Exam
 - Appearance and behavior
 - Thought processes
 - Mood and affect
 - Intellectual functioning
 - Sensorium
- Physical Exam

Domains of Assessment: The Clinical Interview and Physical Exam (cont.)

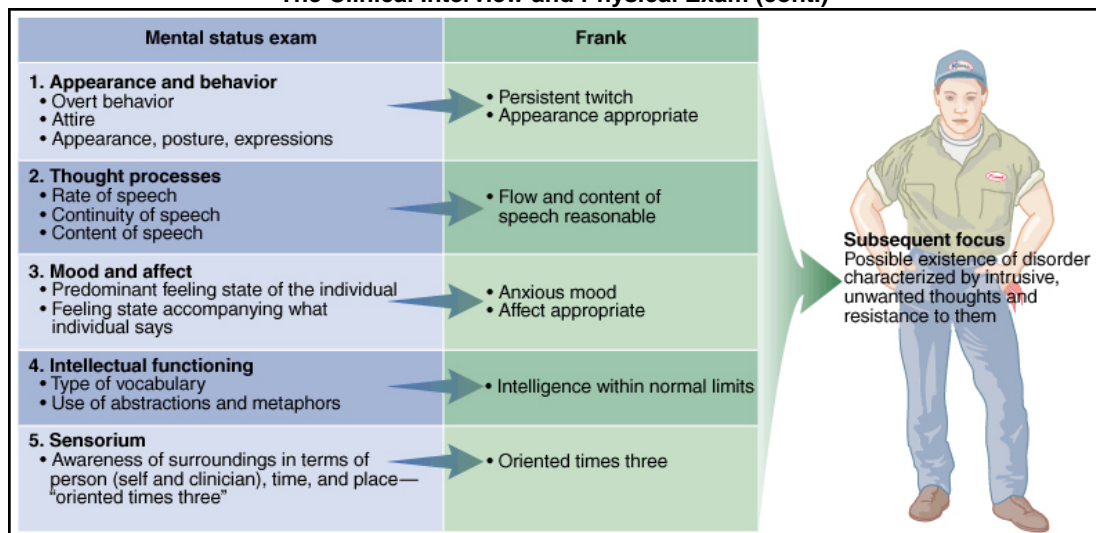


Figure 3.2
Components of the mental status exam

Domains of Assessment: Behavioral Assessment and Observation

- Behavioral Assessment
 - Focus on the present – Here and now
 - Focus on direct observation of behavior-environment relations
 - Purpose is to identify problematic behaviors and situations
 - Identify antecedents, behaviors, and consequences
- Behavioral Observation and Behavioral Assessment
 - Can be either formal or informal
 - Self-monitoring vs. others observing
 - Problem of reactivity using direct observation methods

**Domains of Assessment:
Behavioral Assessment and Observation (cont.)**

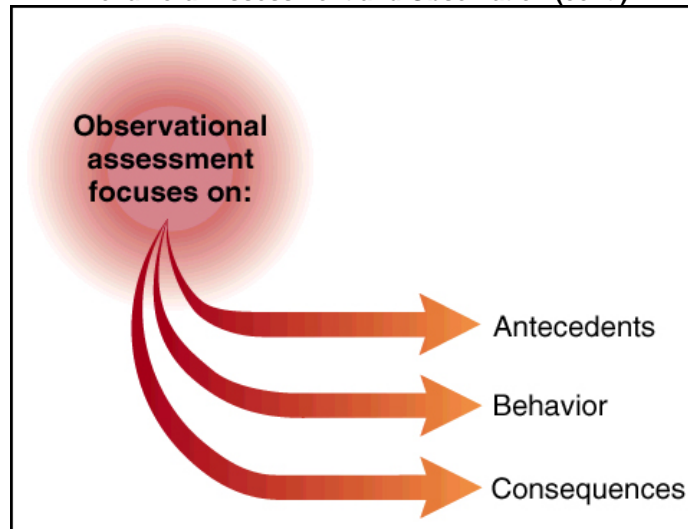


Figure 3.3
The ABCs of observation

Domains of Assessment: Psychological Testing and Projective Tests

- Psychological Testing
 - Must be reliable and valid
- Projective Tests
 - Project aspects of personality onto ambiguous test stimuli
 - Roots in psychoanalytic tradition
 - Require high degree of clinical inference in scoring and interpretation
 - Examples include the Rorschach Inkblot Test, Thematic Apperception Test
 - Reliability and validity data tend to be mixed

**Domains of Assessment: Psychological
Testing and Projective Tests (cont.)**

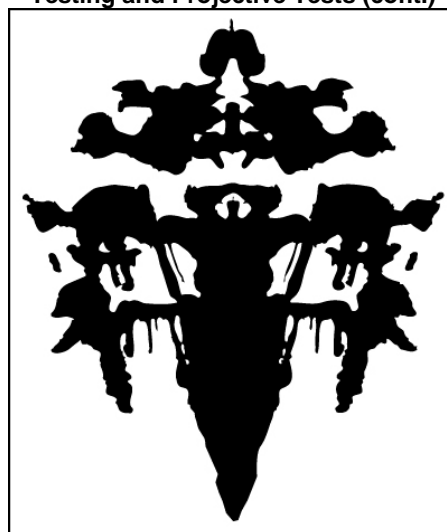


Figure 3.4
This inkblot resembles the ambiguous figures presented in the Rorschach test

Domains of Assessment: Psychological Testing and Projective Tests (cont.)

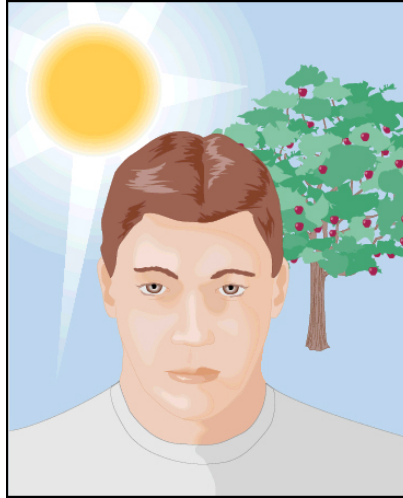


Figure 3.5
Example of a picture resembling those in the Thematic Apperception Test

Domains of Assessment: Psychological Testing and Objective Tests

- Objective Tests
 - Test stimuli are less ambiguous
 - Roots in empirical tradition
 - Require minimal clinical inference in scoring and interpretation
- Objective Personality Tests
 - Minnesota Multiphasic Personality Inventory (MMPI, MMPI-2, MMPI-A)
 - Extensive reliability, validity, and normative database
- Objective Intelligence Tests
 - Nature of intellectual functioning and IQ
 - Verbal and performance domains

Domains of Assessment: Neuropsychological Testing

- Neuropsychological Tests
 - Assess broad range of motor, cognitive, memory skills and abilities
 - Goal is to understand brain-behavior relations (i.e., person's assets and deficits)
 - Examples include the Luria-Nebraska and Halstead-Reitan Batteries
- Problems with Neuropsychological Tests
 - False Positives – Saying “you have a brain problem, but you do not”
 - False Negatives – Saying “you do not have a brain problem, but you do”

Domains of Assessment: Neuroimaging and Brain Structure

- Neuroimaging: Pictures of the Brain
 - Allows for a window on brain structure and function

- Imaging Brain Structure
 - Computerized axial tomography (CAT or CT scan) – Utilizes X-rays
 - Magnetic resonance imaging (MRI) – Utilizes strong magnetic fields
 - Greater resolution

Domains of Assessment: Neuroimaging and Brain Function

- Imaging Brain Function
 - Positron emission tomography (PET)
 - Single photon emission computed tomography (SPECT)
 - Both involve injection of a tracer substance containing radioactive isotopes; SPECT is somewhat less accurate, but less expensive
 - Radioactive isotopes react with oxygen, blood, and glucose in the brain; blood rushes to active areas creating “hot spots”
 - Functional MRI (fMRI) – Provides a view of brief changes in brain activity
- Advantages and Limitations
 - Provide detailed information regarding brain function
 - Procedures are expensive, lack adequate norms
 - Procedures have limited clinical utility

Domains of Assessment: Psychophysiological Assessment

- Psychophysiological Assessment
 - Methods used to assess brain structure, function, and activity of the nervous system
- Psychophysiological Assessment Domains
 - Electroencephalogram (EEG) – Brain wave activity
 - Heart rate and respiration – Cardiorespiratory activity
 - Electrodermal response and levels – Sweat gland activity
- Uses of Routine Psychophysiological Assessment.
 - Disorders involving a strong emotional component
 - Examples include PTSD, sexual dysfunctions, sleep disorders, headache, and hypertension

Diagnosing Psychological Disorders: Foundations in Classification

- Diagnostic Classification
 - Classification is central to all sciences
 - Assignment to categories based on shared attributes or relations
- Terminology of Classification Systems
 - Taxonomy – Classification in a scientific context (i.e., entities/things)
 - Nosology – Application of a taxonomy to psychological/medical phenomena
 - Nomenclature – Labels that comprise the nosology (e.g., anxiety disorders)

Issues with Classifying and Diagnosing Psychological Disorders

- Categorical vs. Dimensional Approaches

- Classical (or pure) categorical approach – Strict categories
- Dimensional approach – Classification along dimensions
- Prototypical approach – Combines classical and dimensional views
- Two Widely Used Classification Systems
 - International Classification of Diseases and Health Related Problems (ICD-10); published by the World Health Organization
 - Diagnostic and Statistical Manual of Mental Disorders (DSM-IV and DSM-IV-TR); published by the American Psychiatric Association

The DSM-IV

- Basic Characteristics
 - Five axes describing full clinical presentation (person and environment)
 - Clear inclusion and exclusion criteria for disorders, including duration
 - Disorders are categorized under broad headings
 - Prototypic approach to classification; one that is empirically grounded

The DSM-IV (cont.)

- The Five DSM-IV Axes
 - Axis I – Most major disorders
 - Axis II – Stable, enduring problems (e.g., personality disorders, mental retardation)
 - Axis III – Medical conditions related to abnormal behavior
 - Axis IV – Psychosocial problems affecting functioning or treatment
 - Axis V – Global clinician rating of adaptive functioning
- Other Unique Features of the DSM-IV

Unresolved Issues in the DSM-IV

- The Problem of Comorbidity
 - Defined as two or more disorders for the same person
 - High comorbidity is the rule clinically
 - Comorbidity threatens the validity of separate diagnoses
- Labeling issues and stigmatization

Summary of Clinical Assessment and Diagnosis

- Clinical Assessment and Diagnosis
 - Designed to provide a complete understanding of the client
 - Designed to aid in understanding and ameliorating human suffering
 - Requires reliable, valid, and standardized information
- Dangers of Diagnosis
 - Problem of reification

- Problem of stigmatization
- Clinical Assessment and Diagnosis: The Core of Abnormal Psychology
 - A multidimensional perspective of persons who are suffering

Conducting Research in Psychopathology

- Questions Driving a Science of Psychopathology
 - What problems cause distress or impair functioning?
 - Why do people behave in unusual ways?
 - How can we help people behave in more adaptive ways?

Basic Components of Research

- Starts with a Hypothesis or “Educated Guess”
 - Not all hypotheses are testable
 - Hypotheses in science are formulated so that they are testable
- Research Design
 - A method to test hypotheses
 - Independent variable – The variable that causes or influences behavior
 - Dependent variable – The behavior influenced by the independent variable

Considerations in Research Design

- Internal Validity vs. External Validity
 - Internal validity – Confidence that effects are due to the independent variable, and not potential confounds
 - Maturation
 - History
 - Regression to the mean
 - External validity – Extent to which the findings are generalizable
- Ways to Increase Internal Validity by Minimizing Confounds
 - Use of control groups
 - Use of random assignment procedures
- Relation Between Internal and External Validity

Statistical vs. Clinical Significance

- Statistical Methods
 - Branch of mathematics
 - Helps to protect against biases in evaluating data
- Statistical vs. Clinical Significance
 - Statistical significance – Means the results are beyond chance or coincidence
 - Clinical significance – Refers to whether the results are clinically meaningful
 - Statistical significance does not imply clinical meaningfulness

- Balancing Statistical vs. Clinical Significance
 - Evaluate effect size
 - Evaluate social validity
- Generalizability and the Patient Uniformity Myth

Studying Individual Cases

- Case Study Method
 - Extensive observation and detailed description of a client
 - Foundation of early historic developments in psychopathology
- Limitations
 - Lacks scientific rigor and suitable controls
 - Internal validity is typically weak
 - Often entails numerous confounds

Research by Correlation

- The Nature of Correlation
 - Statistical relation between two or more variables
 - No independent variable is manipulated
 - Range from -1.0 to 0 to $+1.0$
 - Negative vs. positive correlation
- Limitations
 - Correlation does not imply causation
 - Problem of directionality
- Epidemiological Research: An Example of the Correlational Method
 - Incidence
 - Prevalence
 - Course of disorders and diseases (e.g., AIDS, extent of trauma following disaster)

Hypothetical correlations between age and sleep problems

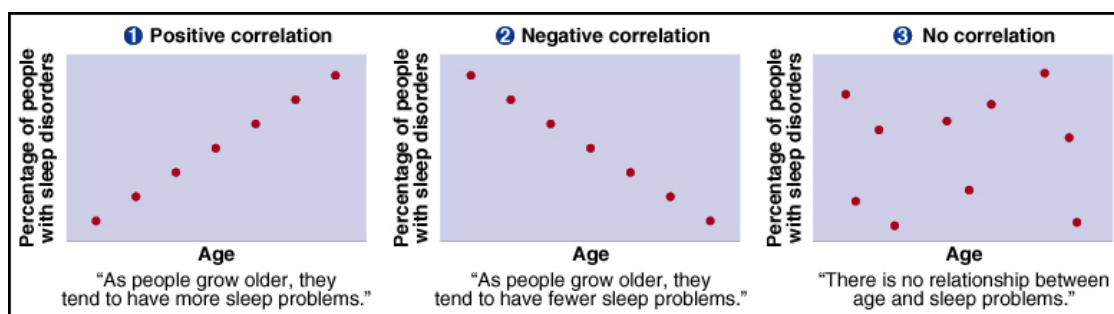


Figure 3.61

Research by Experiment

- Nature of Experimental Research
 - Manipulation of independent variables
 - Attempt to establish causal relations
- Group Experimental Designs
 - Control groups: Placebo vs. double-blind controls
- Comparative Treatment Designs
 - Type of group design
 - Compare different forms of treatment in similar persons
 - Used to address treatment process and treatment outcome

Single-Case Experimental Designs

- Nature of Single Subject Design
 - Rigorous study of single cases over varied experimental conditions and time
 - Repeated measurement and evaluation of variability, level, and trend
 - Premium on internal validity
- Types of Single-Subject Design: Their Nature, Assets, and Liabilities
 - Withdrawal designs
 - Multiple baseline designs

Evaluation of trend and variability in Wendy's anxiety via the single-subject design method

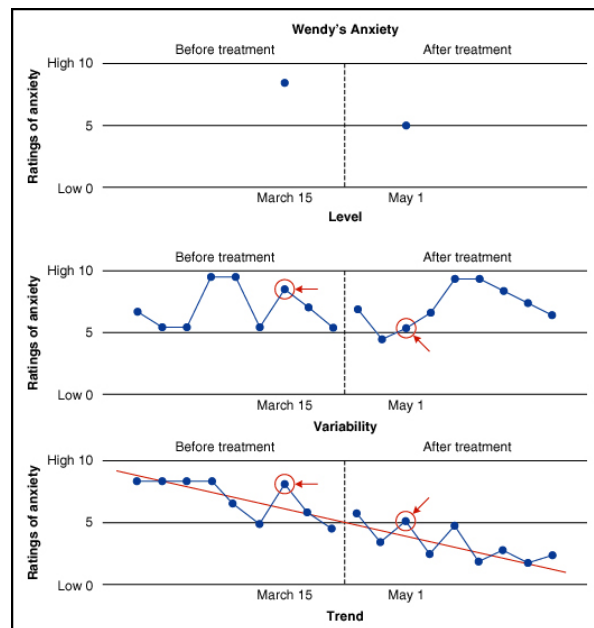


Figure 3.7

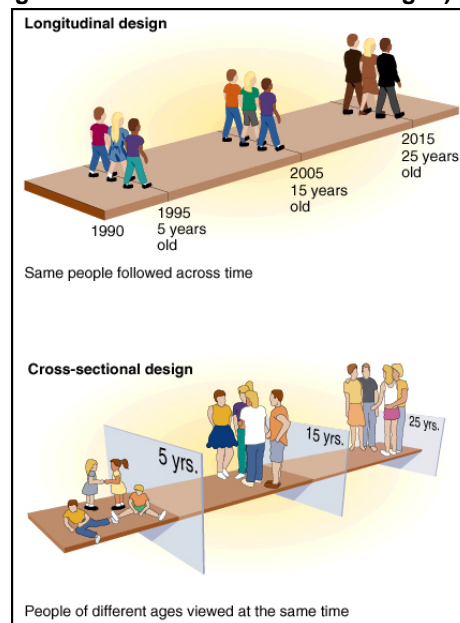
Genetic Research Strategies

- Behavioral Genetics
 - Examine interaction between genes, experience, and behavior
- Strategies Used in Genetic Research
 - Family studies – Examine behavioral pattern/emotional traits in family members
 - Adoptee studies – Allow separation of environmental from genetic contributions
 - Twin studies – Evaluate psychopathology in fraternal vs. identical twins
 - Genetic linkage and association studies – Locate sites of defective genes

Studying Behavior Over Time

- Rationale and Overview
 - How does the problem or behavior change over time?
 - Important in prevention and treatment research
- Time-Based Research Strategies
 - Rationale driving cross-sectional designs – Problem of the cohort effect
 - Rationale driving longitudinal designs – Problem of the cross-generational effect
 - Sequential designs – Combine cross sectional and generational designs
- Assets and Liabilities of Time-Based Research Strategies

Two research designs (i.e., longitudinal and cross-sectional designs)



Studying Behavior Across Cultures

- Value of Cross-Cultural Research: Overcoming Ethnocentric Research

- Assets and Liabilities of Cross Cultural Research
 - Assets – Clarify how psychopathology manifests in different ethnic groups
 - Problems with cross-cultural research

The Nature of Programmatic Research and Research Ethics

- Components of a Research Program
 - Set of inter-related research questions – A tree with many branches
 - Draw on several methodologies in finding answers
 - Conducted in stages, often involving replication
- Research Ethics: Institutional Review Boards and the APA Ethics Codes
 - Informed consent – Historical evolution post WWII
 - Competence – Ability to provide consent
 - Voluntarism – Lack of coercion
 - Full information – Necessary information to make an informed decision
 - Comprehension – Understanding about benefits and risks of participation

Summary of Research Methods

- Nature of Research: Establishing and Testing Hypotheses
- Value of Research Designs Vary Depending on the Questions Posed
- Abnormal Psychology Is Founded in the Scientific Method
 - Understand the nature of abnormality and human suffering
 - Understand the causes of psychological disorders
 - Understand the course of psychological disorders
 - Understand how to prevent and treat psychological disorders
- Replication Is the Corner Stone of Science and Programmatic Research
- Research Must Occur in the Context of Ethical Considerations and Values

Discussion Group 3 – Questions

- **Identify 3 goals of clinical assessment.**
- **Describe differences between objective and projective approaches to psychological assessment.**
- **What are some components (at least 2) of the mental status exam? Describe...**