Assessment in Research

Modalities of Assessment
- Global Ratings
- Self-Report
- Behavioral Observation
- Projective Techniques
- Psychophysiological Measures
- Neuropsychological Assessment

Global Ratings

Characteristics
- Quantify impressions of general characteristics
- Could be completed by therapist, peers, significant others, teachers, etc.
- Flexible and easy to complete

Limitations
- Construct validity is questionable
- Weak sensitivity
- Gross simplification of complex constructs
Self Report

Characteristics
- Respondent describes his/her own personality, emotions, cognition, behavior, symptoms, etc.
- Multiple items
- Useful in clinical psychological research—often can't get the information any other way
- Easy to administer
- Diverse well-validated instruments available

Self Report

Limitations
- Response issues
  - Social desirability response set: positive self-presentation
  - Acquiescence response set: person tends to respond in a positive direction, regardless of item content
  - “Fake-bad” profiles: person reports lots of symptoms
  - Item omissions: can invalidate test
  - Unusual patterns of response
- Need to use validated measures
- Need to use appropriate norms

Behavioral Observation

Recording
- Format can be narrative or event records
  - Narratives
    - record as much information as possible
    - useful in early research stages
    - can be biased by observer characteristics
    - difficult to analyze
Behavioral Observation

**Recording**
- Event Records
  - Define behaviors and specify property or dimensional quantity to be recorded
  - Note each time an event occurs and tally characteristics of events
  - Interval Recording: Divide a period of recording into smaller intervals
  - Frequency-interval recording: count number of responses during each interval.
  - Whole interval recording: event must occur throughout the entire interval

**Observing**
- Participant Observers
  - Participants provide the information
  - Advantages
    - Lower reactivity to testing, lower cost, access to "private" or infrequent behavior
    - Disadvantages: difficulty training (reliability), potential for bias (validity)
- Non Participant Observers
  - Trained persons make the observations
  - Advantages: better reliability and validity
  - Disadvantage: cost, reactivity, can't observe some behaviors, difficult to catch infrequent behaviors

Questions in designing an observation system
- What is the purpose of the assessment?
- Where will the assessment take place?
- What restrictions will be placed on participants?
- What characteristic of behavior is of greatest interest?
Questions in designing an observation system

- What amount of behavior will observers assess?
- What is the size of the behavior?
- What resources are available?
- How will scientific adequacy be established?
- How much reactivity are you willing to allow?

Behavioral Observation

**Advantages**
- Flexible
- Can be used in many contexts
- Ecological Validity

**Disadvantages**
- Time and resource intensive
- Can “miss” behaviors of interest
- Reactivity

Establishing Scientific Adequacy

- **Accuracy (of instrument)**
  - Strict rules about coding system
  - Pilot test
  - Calibrate

- **Reliability (of observers)**
  - Percent agreement
  - Kappa (Cohen, 1960)
  - Correlation
  - Intra-class correlation
Calculating Kappa

- Kappa = \( (p_o - p_c)/(1 - p_c) \)
- \( p_o \) = proportion of agreement from two observers
- \( p_c \) = proportion of chance agreement
- Ranges from -1 to 1 (0 is chance level)
- Takes into account the involvement of chance

To Increase Reliability

- Overtrain observers
- Keep coding simple
- Provide frequent feedback
- Check agreement at random times
- Retrain periodically
- Maintain observer motivation
- Avoid always pairing the same observers together
- Conduct periodic recalibrations of the scheme
- Train on behaviors similar to what will really be encountered.

Projective Techniques

Characteristics
- Participants respond to ambiguous stimuli to reveal underlying characteristics, motives, themes, and origins of distress indirectly

Limitations
- Scoring subjective
- Construct validity and reliability questioned
- Expensive and time consuming.
Psychophysiological Techniques

**Characteristics**
- Designed to examine physiological correlates of affect, cognition, and behavior
  - Can assess processes out of conscious awareness
  - Direct – no response bias

**Limitations**
- Physiological responses are non-specific
- Expensive and requires expertise

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Neuropsychological Measures

**Characteristics**
- Standardized tests measure different aspects of cognitive or intellectual functioning

**Limitations**
- Administration and scoring requires expertise
- Expensive and time consuming
- Responses can be “faked”

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Use Multiple Measures

- Nature of clinical constructs
- Specificity of Performance
- Method Variance