

● 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

Behavioral Observation

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

- $\text{Kappa} = (p_o - p_c) / (1 - p_c)$
- 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

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”

Use Multiple Measures

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