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SPHSC 569

Dependent Variables

Slide 2

Dependent Variable

Data Collection
What to measure
How to measure
When to measure

Slide 3

Quantitative Data Collection:
What to Measure

Objective:
- Measurement of the specific presenting problems (treatment objectives) for the client expressed in quantifiable and measurable way
- Measurement of related behaviors (stimulus & response generalization; WHO) (social validity)
- Measurement of control behavior when possible

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Guidelines for
Collecting Data:
What to Measure

- Select measures that are both
  sensitive, meaningful, and
  accurate
  – consider psychometric properties
    validity and reliability
  – consider social validity (Schwartz
    & Baer; Wolf)
    • Normative Comparison
    • Relevant Peer Comparison
    • Subjective Evaluation (consumers)

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Types of Measures

- Probe Measures
  – Target
  – Generalization
  – Control
- Treatment Measures

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Types of Data/Measures
(Quantitative and Qualitative
Data)

- Physiological Data
- Self (Other)-Report Data
- Observational Data

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Physiological Data

Date involving instrumentation
Issues:
- Feasibility-costs, standardization
- Organism variables (age, sex, physical fitness, drug use etc.)
- Stimulus/situational variables
- Examples

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Self (Other)-Report Data

- Interview (client/other retrospective, client/other current, clinician observation during interview)
  - Unstructured interviews
  - Semi-structured interviews
- Issues associated with the interview
  - Style/traits of interviewer
  - Style/traits of respondent

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Self (Other)-Report Data

- Questionnaires/Rating Scales
  - Broad questionnaires
  - Specific questionnaires
  - Measures of client (others) satisfaction
  - Self-ratings
  - Informant Reports
- Issues in Self (Other)-Report
  - Stimulus variables
  - Organism variables
  - Design variables (construction of questionnaire/rating scales)

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Observational Data

Direct observation and self-monitoring

- Observational Quantitative Data
  - Frequency
  - Time Based (duration)
  - Interval

(Sulzer-Azaroff & Mayer Handout)

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Observational Data

- Issues
  - Sources of Bias
    - Observer characteristics (gender, expectation)
    - Reactivity
    - Observer drift (consensual)
    - Complexity of rating system and behaviors to be coded (including valence)
    - Sampling method
    - Ecological variables
    - Observational medium Nature of training (reliability)

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Guidelines for Collecting Data: How to measure

- Collect data under the same/similar conditions across time--conditions of data collection
- Consider along a continuum
  - Manner of collection (sampling technique)
  - Setting/situation of collection
  - Individuals involved in collection
  - Obtrusiveness/reactivity of collection

(Handout)

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Data Collection:
When/How Often

Four Main Considerations

- Change due to treatment versus maturation (or other threats to validity)
  – Multiple measures (control)
- Change that is real versus random
- Importance of change
  – Degree of change, rate/slope of change
- Impact of change
  – Social validity measures

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Guidelines for Collecting Data:
When/How often to measure

- Collect measures often, periodically and systematically (How often is enough?) (How often is feasible?)
  – Weekly
  – Every two/three weeks
  – Monthly
- Consider your research question

(e.g., ultimate versus instrumental versus intermediate change)

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Guidelines for Collecting Data:
When/How often to measure

- Record inconvenient measures less frequently than more convenient measures
- Keep track of significant events (anticipated or not) that might account for alterations in or variability in performance
- Consider client reaction to measurement
- Graph the data (including the significant events)

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Guidelines for Collecting Data:
When/How often to measure

- Collect often enough to see change (be mindful of phase changes)
- Follow major treatment breaks
  - Completion of a treatment step
  - Completion of particular treatment criterion
  - Intersperse during treatment

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When to Measure Change

BOTTOM LINE:
- What is reasonable
- What will best allow me to monitor progress
- What will best reflect (and prove) change

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Dependent Variables

- Examples