Psychology 2300

Chapter 12

- Small-N Designs: provide a lot of information from a few people
  - Case Studies: an intensive description and analysis of a single case
    - Can be an individual, a group, or an organization
    - Types of Case Studies:
      - Snapshot case: done within a single time period
      - Longitudinal case: done over time, as key variables change naturally
      - Intervention case: done over time, with a planned or unplanned change
        - Example – treatment of disease with new medication
    - Advantages of Case Studies
      - Rich source of ideas for developing research questions
        - Provide rationale, not conclusion
      - Can provide tentative evidence in support of a theory
      - Can provide evidence against a theory
      - Useful method for studying a rare event
      - Useful way to try out and examine a new treatment
    - Disadvantages of Case Studies
      - Observer biases likely
      - Possibility of demand characteristics and expectancy effects
      - Extremely limited internal validity
      - Limited external validity
    - Ways to Strengthen Case Studies
      - Conduct multiple case studies
        - Replicate the case study
        - Meta analysis: combine several different case studies on the same phenomena
      - If a treatment is being examined, select other cases that vary on variables of interest
        - Gender of the client
        - Theoretical orientation of the therapist
        - Problem being treated
      - Expand case study to a single-case experimental design
- Single-Case Experimental Designs: a type of within-subject design with intensive examination of one person over time in controlled conditions
  1. Stable Baseline Design
     - Measure dependent variable and establish stable baseline
     - Introduce treatment (independent variable) and measure dependent variable
     - Compare baseline and treatment stage
  2. Reversal Design
     - Alternate baseline (A) and treatment (B) conditions
     - Change in dependent variable from baseline (A) to treatment (B), back to baseline (A), and so forth
       - Provides support for effects of treatment

        - If behavior reverts to baseline after treatment is discontinued then we have evidence for effectiveness of treatment
        - In essence, we are creating replication within the experiment
    - Explanations for Lack of Return to Baseline in Reversal Design
        - Treatment is such that effect continues even when treatment is withdrawn
        - Variable confounded with first treatment
        - May also be ethical issues in removing an effective treatment (for example self-injurious behavior in children)
- Multiple-Baseline Design: establishes multiple baselines of behavior (can be in different settings)
    - Introduce treatment in one setting at a time and record effects
    - Strong support for effects of treatment if:
        - Baselines remain stable in all settings before treatment applied in that setting
        - Behavior changes as predicted after treatment applied in each setting
        - Best when 3-4 baselines are used
    - Advantages over stable baseline or reversal design
        - Replications are built into the design
        - Replication across settings and time strengthens external validity
        - Can be used when removing a treatment is impractical or unethical
    - One problem – effects may generalize across settings before treatment introduced