

## Quasi-Experimental and Single Case Designs



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### The Basics

- "Cause"-effect relation between variables
- *Usually* one categorical, quasi-independent variable and one continuous, dependent variable
- Requires *at least one* comparison group



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### Quasi-experiments vs. \_\_\_\_\_

- Quasi-experiments do not randomly assign participants to conditions
- \_\_\_\_\_ = participants are already in one condition or another
  - Exists prior to research
  - Unethical or impossible to assign participants to conditions



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**Quasi-experiments vs.**

- Less experimental control in quasi-experiments → cannot argue definite causality
- More threats to internal validity in quasi-experiments

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**Quasi-IV's vs.**

- Quasi-independent variable
  - Treatment
  - Experience
  - Condition
- \_\_\_\_\_
  - gender
  - race
  - age

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**Quasi-experimental hypotheses**

- Ex-convicts who go through a Halfway House have lower recidivism rates than ex-convicts who are simply released
- Children who are physically abused show more violent behaviors than children who are sexually abused or not abused

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Nonequivalent Design

- Compare to a similar group that does not receive the quasi-experimental IV
- Posttest only
  - Only interested in outcome
- Pretest-Posttest
  - Interested in baseline level for the groups

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Time Designs

- Simple interrupted
  - Several pretest and posttest measures
- Interrupted with a reversal
  - IV introduced then removed
- Control group interrupted
  - Same as simple, but control group doesn't receive the quasi-independent variable

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\_\_\_\_\_ Designs

- Quasi-independent variable = TIME
- How does the level of the DV change with maturation?
  - How stable is personality / pathology?

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### Evaluation

- The effectiveness of interventions
  - DARE, educational program, marketing idea
- Often reporting to policy-makers, not scientists

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### Single Case Research



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### The Basics

- Analyzing the behaviors of a single individual, group, or event
- Experimental or observational research

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### Types of Designs

- ABA Design
  - Baseline, IV, Baseline
- ABC Design
  - Baseline, Level 1, Level 2
- Can have any combination
  - e.g., ABACA

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### Reporting Data: Analysis

Time Point	Mean Value
T1	1.5
T4	1.5
T7	2.0
T10	1.5
T13	1.5
T16	7.0
T19	7.0
T22	7.0
T25	7.0
T28	7.0
T31	3.5
T34	3.5
T37	3.5
T40	3.5
T43	3.5

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### Pros and Cons of Single Case Experimental Designs

- Pros
  - no individual difference error variance
  - raw data = real numbers
  - reliability easily obtained through replication
- Cons
  - Cannot study interactions among variables
  - Sample may not be representative

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\_\_\_\_\_ Studies

- A detailed account of a single individual, group, or event
- Common in clinical fields
- Usually reported as a narrative

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Uses for  
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- To foster ideas
- To describe rare phenomena
- Anecdotal evidence
- Psychobiography

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Problems with  
\_\_\_\_\_ Studies

- extraneous variables
- observer biases

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