CONCEPTUALIZATION AND OPERATIONALIZATION

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GOALS

- How do we translate abstract concepts into measurable variables?
- What are the implications of different types of measures?
  - Validity vs Reliability
  - Construct validity and measurement bias

CONCEPTUALIZATION

- How do you **define** what you are talking about? What do you mean by your concept?

  - Are there ranges or categories?

  - What dimensions exist for this concept? How do they relate to each other?

    - Dimension: a distinguishable attribute of a concept

OPERATIONALIZATION

- How am I going to **measure** the concept?
  - What indicators exist for this concept?
    - Indicator: sign of presence or absence
    - What information is actually possible to observe?
  - What level of measurement do I want?
    - Am I working with categories or a scale? Is precision possible or desirable?
    - Aggregation: Can I combine categories into a single group without losing meaning?
  - How will I determine how cases are categorized?
    - How can I ensure my decisions can be reproduced?

VALIDITY AND BIAS

VALIDITY

- ***Construct***
- *Internal*
- *External*
- Face
- Predictive

BIAS

- ***Measurement***
- *Selection*
- *Omitted Variable*
- Publication
- Survivorship
- Confirmation

VALIDITY VS. RELIABILITY

- Precision = level of detail in description

- Reliability = How reproducible
- Validity = Accuracy = How correct

Reliable, but not valid   Valid, but not reliable   Neither reliable nor valid   Reliable and valid

CONSTRUCT VALIDITY

- Construct validity
  - How well do your measures capture the original concepts in a study?
- Measurement bias
  - Do your measures skew the results in specific ways?
  - Do respondents have incentives to lie or forget?
  - Can you estimate the response error?

MEASUREMENT AND VALIDITY

- What are the indicators?

- What is the level of aggregation?

- How are cases categorized?

- Construct validity: Do the indicators fully capture the concept?

- Construct validity: Should maximize similarity within a category and distinctions between categories

- Reliability/Measurement bias: Can the measure be reproduced by others?