

Validity in Inference

Experimental Validity

- Statistical Conclusion Validity
- Internal Validity
- Construct Validity
- External Validity

Internal Validity

- Question: Can observed changes can be attributed to the manipulation, and not to other plausible causes?
- Internal validity is study specific
- Internal validity does not guarantee construct validity

Single Group Designs

- Pre-Test only design
- Pre-Test Post-Test design

**Single Group Studies
Threats to Internal Validity**

- History
- Maturation
- Testing

**Single Group Studies
Threats to Internal Validity**

- Instrumentation
- Regression
- Mortality

Multiple Group Threats to Internal Validity

- Selection Bias
 - Selection-History
 - Selection-Maturation
 - Selection-Testing
 - Selection-Instrumentation

Multiple Group Threats to Internal Validity

- Selection Bias
 - Selection-Instrumentation
 - Selection-Mortality
 - Selection-Regression

"Social" Threats To Internal Validity

- Diffusion or Imitation of Treatment
- Compensatory Rivalry
- Resentful Demoralization
- Compensatory Equalization of Treatment

External Validity

- How “generalizeable” are the results?
- Sample characteristics
- Stimulus characteristics and settings
- Time

Threats to External Validity

- Test Sensitization
- Multiple Treatment Interference
- Experimenter Characteristics

Threats to External Validity

- Reactivity of Experimental Arrangements
- Reactivity of Assessment

Relationship between Internal and External Validity

- Reciprocal Association
- Internal Validity is logically prior
- Best to use laboratory and naturalistic studies in combination

Threats to Construct Validity

- Mono-operation bias
- Mono-method bias
- Experimenter Expectancies

Threats to Construct Validity

- Demand Characteristics
- Attention to Subjects
