

# Validity



# Types of Validity



- ① Conclusion Validity
- ① Internal Validity
- ① Construct Validity
- ① External Validity

# Types of Validity (Cont.)



## ◎ Conclusion Validity

- Whether it is a reasonable conclusion about a **relationship** in our observation.
- 2 possible conclusions: **There is a relationship.**  
**There is not a relationship.**
- Wrong conclusions: **Type I Error**  
**Type II Error**

# Types of Validity (Cont.)



## Improving Conclusion Validity

- Use a larger sample size ( $n$ )
- Increase the effect size
- Increase the risk of Type I error ( $\alpha$ )  
<instead of using 0.05 significant level,  
using 0.10 as the cut of point>

# Types of Validity (Cont.)

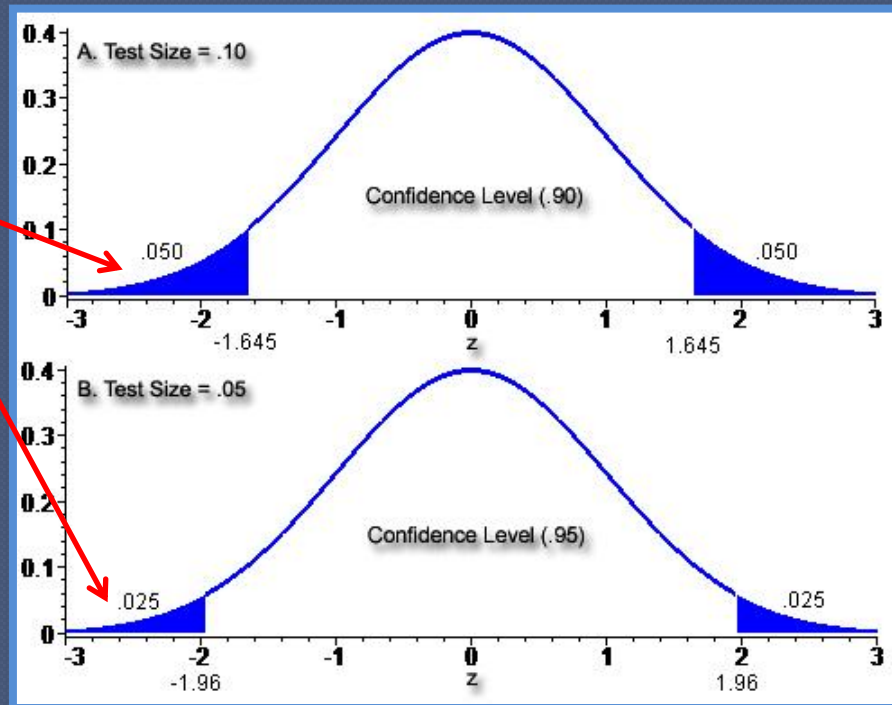


## Improving Conclusion Validity

0.10 significant level

Rejection region

0.05 significant level



# Types of Validity (Cont.)



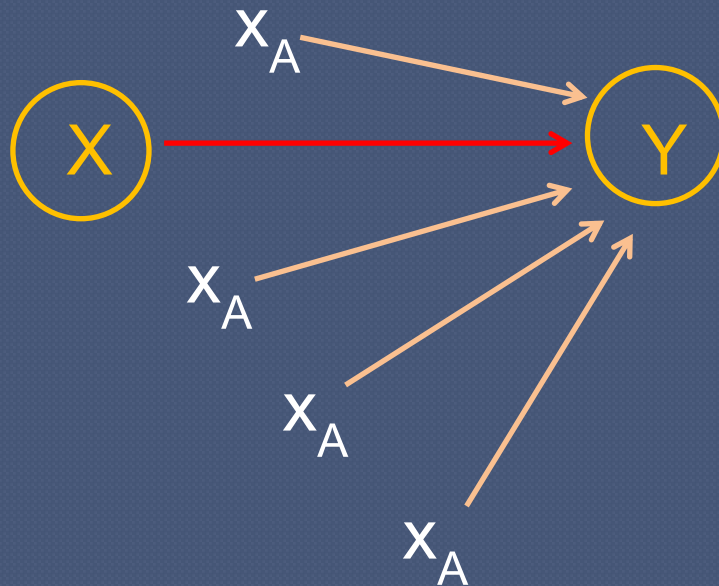
## Internal Validity

- Assuming that there is a relationship, is the relationship a **causal** one?
- 3 criteria for a causal relationship
  - ✓ Cause happened before Effect
  - ✓ Have some types of relationship
  - ✓ No plausible Alternative Explanations

# Types of Validity (Cont.)



## Alternative Explanations



# Types of Validity (Cont.)



## Improving Internal Validity

Use control group + Random assignment

Baseline

Outcomes

○

X

○

← Treatment group

○

○

← Control group

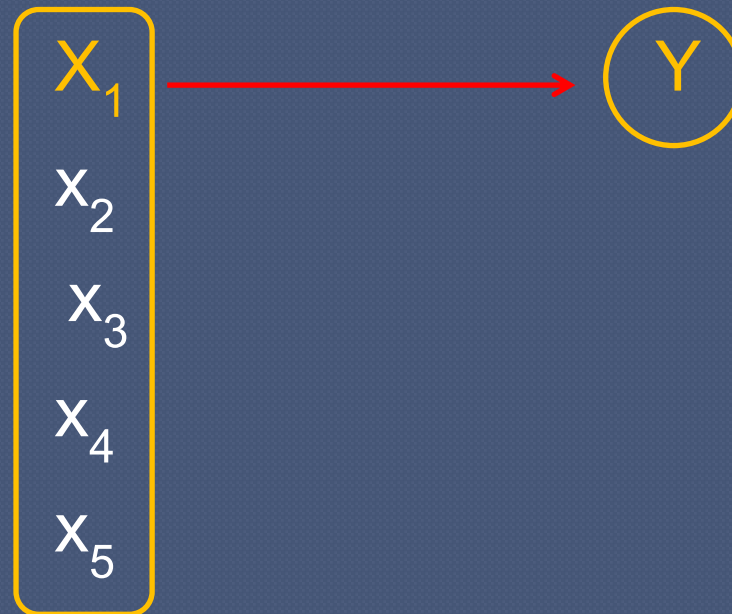


# Types of Validity (Cont.)



## Improving Internal Validity

➤ Add control variables



# Types of Validity (Cont.)



## ◎ Construct Validity

- An assessment of how well you translated your ideas or theories into actual measures
- Use the term “**Operationalization**” to describe the act of translating a construct into its manifestation

# Construct Validity (Cont.)



⊙ Land of Theory (Idea) → What you think

Cause Construct → Effect Construct

Operationalization



Operationalization



⊙ Land of Observation (Real World) → What you test

Program (X) → Outcome (Y)

# Types of Validity (Cont.)



## Improving Construct Validity

- Think through your concept better
- Get experts to critique your operationalizations
- Try to implement multiple versions of your program

# Types of Validity (Cont.)



## External Validity

- The degree to which the conclusions in your study would hold for other persons in other places and at other times
- Use the term “**Generalization**” to describe the process of forming conclusions based on a small amount of information

# Types of Validity (Cont.)



## Generalization



Population

Sampling



Generalization



Sample

# Types of Validity (Cont.)



## ⦿ Improving External Validity

- Do a good job of drawing a sample from population  
(Using **Random Selection**)
- Do your study in a variety of places, with different people and at different times (Stronger the more you replicate your study)

