

Planning a Study

Picking a Topic

- Generalize
 - Go beyond a specific instance
- Social Pattern
 - Interconnection
- Application
 - Applies to collection of people
- Empirically observable
 - Can be detected and replicated

Do the Poor Pay More?

- Generalize
 - Not just one family or neighborhood
- Social Pattern
 - connect income level with businesses present
- Application
 - Applied to low-income neighborhoods everywhere
- Empirically observable
 - There are data to answer this question, easily replicated

Literature Review

- Read past studies
- Narrow down topic
- Examples of research designs, measures
- What is already known
- How is research presented

Focus on a Research Question

- Question is narrower than topic
- Empirically Testable
 - NOT Should abortion be legal?
- Not just variables
 - NOT Capital punishment and racial discrimination
- Clear, not vague
 - NOT How does poverty affect children?

Good Questions

- Exploratory
 - How has child abuse changed in the Rhode Island in the last 10 years?
- Descriptive
 - Are children raised in impoverished households more likely to have medical, or socio-emotional adjustment difficulties than children raised in nonimpoverished households?

Good Questions

- Explanatory
 - Is a lack of sufficient funds for preventative treatment a major cause of more serious medical problems among children raised in impoverished households?
- Evaluative
 - Will third grade students' reading scores show larger improvements under the new reading program than the existing reading program

Additional Ways to Evaluate Research Questions

- Potential to advance understanding

Additional Ways to Evaluate Research Questions

- Potential to advance understanding
- Is knowledge potentially important?
 - Test part of a theory
 - Demonstrate a weakness
 - Demonstrate effective procedures
 - Demonstrate a new finding

Additional Ways to Evaluate Research Questions

- Potential to advance understanding
- Is knowledge potentially important?
- Do I find the idea interesting
- Practical concerns-is the idea researchable?
 - Ethical consideration
 - Can you collect the data needed?
 - Is it too difficult to design

What Do You Examine?

- What is a variable?
 - A concept that varies
 - A hypothesis addresses how they vary
 - Variable vs. value or category
 - Gender vs. male
 - Marital status vs. married

Types of Variables

- Independent Variable
 - Cause variable
 - Independent of prior causes that act on it
 - In an experiment, what is controlled or manipulated
 - IVs come before DVs
 - IVs have an impact on other variables

Types of Variables

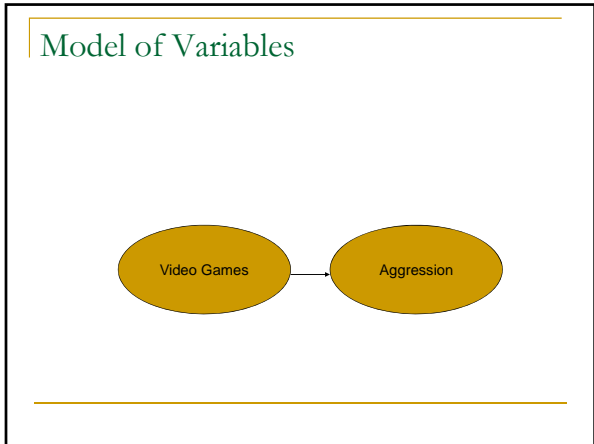
- Dependent Variable
 - Effect variable
 - Depends on something

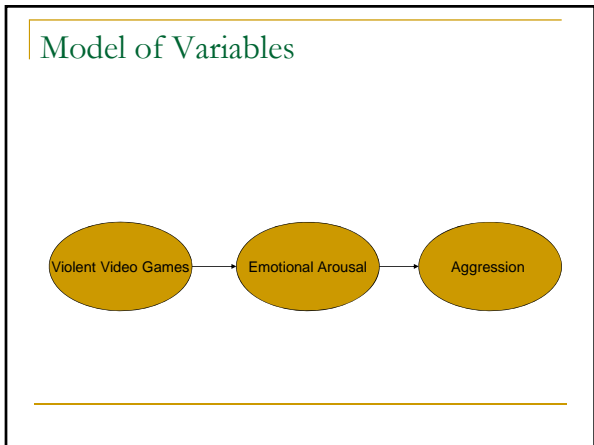
Types of Variables

- Intervening variable
 - Third variable
 - Explains relation between IV and DV

Model of Variables

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graph LR; Income([Income]) --> Businesses([Number of businesses]);
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- Causal Hypothesis
- Has 2 variables
 - Specifies how variables are connected
 - which is cause and effect
 - which comes first
 - Restate as prediction
 - Can show support with data
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The Null Hypothesis (H_0)

- Predicts there is no relationship between variables
- Null = no or nothing
- H_0 There is no relation between income level and number of businesses
- H_1 There is a relation between income level and number of businesses

Unit of Analysis

- The case or unit on which you measure variables
 - Shaped by research question
 - Individual (teens)
 - Group (family, friends)
 - Organization (corporation)
 - Social institution (religion)
 - Society (nation or tribe)

Spuriousness

- Illusionary relationship
 - Unacknowledged other variable
 - Cause of BOTH IV and DV
