Research Hypotheses: Types

Focus:
- Types of Research Hypotheses
- Alternative terms

Research Hypotheses: Null vs. Alternative Hypothesis

H₀: Null Hypothesis
H₁: Alternative Hypothesis:
- What we are attempting to demonstrate (or support)
  - Attributive
  - Associative
  - Causal

Attributive Research Hypothesis
- states that attributes
- a behavior exists
- can be measured, and
- can be distinguished from other similar behaviors
- We can "describe" something
  H₁: Most of the population has heard of Disneyland.
  H₂: Disneyland visitors are diverse in demographics.
  H₃: Most of the population is ready to visit Disneyland.

- Univariate hypothesis (one variable)
**Associative Research Hypothesis**
- states that
- a relationship exists between two behaviors
- Knowing the amount or kind of one behavior helps you to predict the amount or kind of the other behavior
- \( H_1 \): Knowledge of Disneyland is associated with visiting Disneyland.
- \( H_2 \): Income level is correlated with visiting Disneyland.
- \( H_3 \): People who live closer to Disneyland are more apt to visit Disneyland.
- Bivariate hypothesis (two variables)

**Causal Research Hypothesis**
- states that differences in the amount or kind of one behavior causes differences in amount or kind of the other behavior
- \( H_1 \): Frequent exposure to Disneyland advertising results in increased attendance at the Disneyland.
- \( H_2 \): An increase in consumer confidence translates into increased attendance at Disneyland.
- \( H_3 \): Discount tickets for local residents produces an increase in the crowds at Disneyland.
- To support a causal hypothesis:
  - demonstrate a statistical relationship
  - temporal precedence (“cause precedes effect”)
  - elimination of alternative explanations
- Bivariate hypothesis (two variables)

**Identify each type of research hypothesis below ...**
- I want to know if I can predict scores on Exam 1 from performance on homework assignments.
  - A. Attributive
  - B. Associative
  - C. Causal
- I want to construct a score that reflects how well you did on the computational parts of your homework assignments.
  - A. Attributive
  - B. Associative
  - C. Causal
- I want to know whether I can improve your scores on Exam 1 by grading and returning your homework assignments the next class period.
  - A. Attributive
  - B. Associative
  - C. Causal
<table>
<thead>
<tr>
<th>Type</th>
<th>States:</th>
<th>Examples</th>
<th>Other</th>
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| **Attributive** (univariate) | - a behavior exists.  
- can be measured. and  
- can be distinguished from other similar behaviors | H1: Most of the population has heard of Disneyland.  
H2: Disneyland visitors are diverse in demographics.  
H3: Most of the population is ready to visit Disneyland. |       |
| **Descriptive** Knowledge   |                                                                        |                                                                          |       |
| **Associative** (bivariate) | - a relationship exists between two behaviors  
- knowing the amount or kind of one behavior helps you to predict the amount or kind of the other behavior | H4: Knowledge of Disneyland is associated with visiting Disneyland.  
H5: Income level is correlated with visiting Disneyland.  
H6: People who live closer to Disneyland are more apt to visit Disneyland. |       |
| **Predictive** Knowledge    |                                                                        |                                                                          |       |
| **Causal** (bivariate)      | - differences in the amount or kind of one behavior  
- cause/produce/creates/exchange/etc.  
- differences in amount or kind of the other behavior | H7: Frequent exposure to Disneyland advertising results in increased attendance at the Disneyland.  
H8: An increase in consumer confidence translates into increased attendance at Disneyland.  
H9: Discount tickets for local residents produces an increase in the crowds at Disneyland. |       |
| **Causal Understanding** Knowledge |                                                                           | To support a causal hypothesis:  
- demonstrate a statistical relationship between the two variables  
- temporal precedence  
- elimination of alternative explanations (no other viable cause/explanations of the effect) |       |

A hypothesis by any other name…

- **Research Hypothesis:** An educated guess
- **Research Question:** A hypothesis in the form of a question
- **Research Objective:** Statements of what the researcher intends to do

Remember:

- **Regardless of the terminology, you are testing hypotheses (guesses)**
- The Study Objectives could include:
  - Determine the potential effect of Disneyland’s advertising
  - Identify the demographics of Disneyland’s visitors
  - Determine which factors most likely influence attendance at Disneyland
  - etc.
Processing Time!

• What are the three types of research hypotheses?
• Which of the types of research hypotheses is the most difficult to support?
• Can you come up with at least one research hypothesis for each type?

Attributive
Associative
Causal