

# Theories and Hypotheses



---

---

---

---

---

---

---

---

\_\_\_\_\_ vs.  
\_\_\_\_\_

- \_\_\_\_\_
  - Broad explanation and prediction concerning a phenomenon of interest
  - General statement
- \_\_\_\_\_
  - A prediction, stemming from a theory, stated in a way that allows it to be tested
  - Specific statement

---

---

---

---

---

---

---

---

*Good* \_\_\_\_\_ ...

- Are testable
- Are broad and can be generalized
- Withstand the test of time
- Are practical to real life
- Solve an important problem
- Provide a better explanation than previous theories

---

---

---


---

---

---

---

---



## Behavioral

---

---

---

---


---

---

---

---

---



## \_\_\_\_\_ as the basis of research

- Purpose of research is to explain:
  - \_\_\_\_\_ variability
  - \_\_\_\_\_ differences
  - \_\_\_\_\_ variability
- All analyses in some way take variability into account

---

---

---


---

---

---

---

---



## Measuring

---

- Behavior must be quantified in some way
- Statistical definition: variation of scores around the mean (aka. "variance")
- Measures of behavior must be able to "pick up" variation

---

---

---


---

---

---

---

---



### Two \_\_\_\_\_ of variability

- \_\_\_\_\_ = What you have identified as a cause of variability
  - e.g., provocation causes aggression
- \_\_\_\_\_ = What you have not accounted for
  - e.g., past behavior, situational cues, personality

---

---

---


---

---

---

---

---



### Levels of \_\_\_\_\_

- Relevance to an existing theory (BEST)
- Relevance to applied problems (\$\$\$)
- Relevance to conflicting results
- Relevance to a poorly conducted study

---

---

---


---

---

---

---

---



### Steps to Generating \_\_\_\_\_

- Ask yourself, "Why am I interested in psychology?"
- Find out what has already been done in this area
- Make a prediction that no one has tested yet
  - Statement, not a question
  - Compare groups or variables

---

---

---


---

---

---

---

---



### Relations between

---

- Relationship of one variable to another
- Correlational design
- Ex. GPA is positively associated with the amount of time a person spends studying

---

---

---


---

---

---

---

---



### Comparing

---

- Differences between groups
- Experimental or quasi-experimental design
- Ex. People who receive an antidepressant will show significantly less depressive symptoms than people who receive a placebo

---

---

---


---

---

---

---

---



### \_\_\_\_\_ vs. Alternative Hypotheses

- \_\_\_\_\_ = there will be no effect, no relation, no difference between groups  
– Avoid “proving the null”
- Alternative hypothesis = there will be a significant effect, relation, or difference between groups

---

---

---


---

---

---

---

---



### Post hoc explanations vs.

---

- Post hoc explanation = addressing an effect in the opposite direction
  - e.g., self-esteem and race
- \_\_\_\_\_ = Hypothesizing  
After the **R**esults are **K**nown; "I knew it all along"
  - Avoid **HARK**ing

---

---

---


---

---

---

---

---



### Remember

- Hypotheses are \_\_\_\_\_ involving a clear prediction
- Hypotheses must be \_\_\_\_\_
- Hypotheses determine:
  - The design of your project
  - The analyses you will use
  - The conclusions you can make

---

---

---


---

---

---

---

---



### Ask these questions, answer with a hypothesis

- WHY and HOW does the behavior occur?
- In which situations and for which type of person is the effect strongest?
- What are some alternative explanations for a behavior?
- Who doesn't "fit the mold"? Why not?

---

---

---

---

---

---

---

---