Research Methods in Social Psychology

Discussion Questions

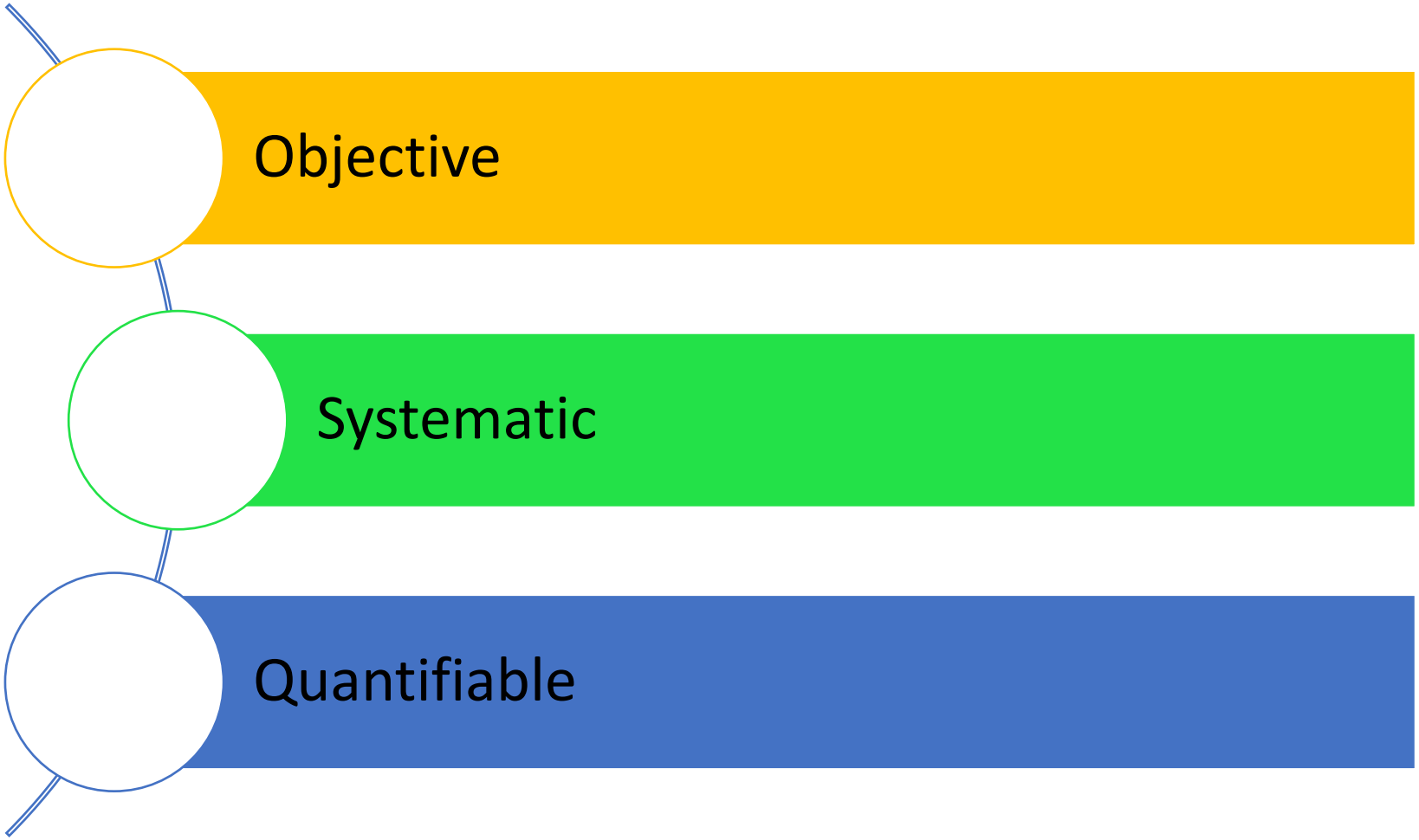
1. What is the scientific method? Why is understanding research methods important?
2. What is descriptive research?
3. What is correlational research?
4. What is experimental research?
5. What is a meta-analysis?

What is the scientific method? Why is understanding research methods important?

What is the scientific method?

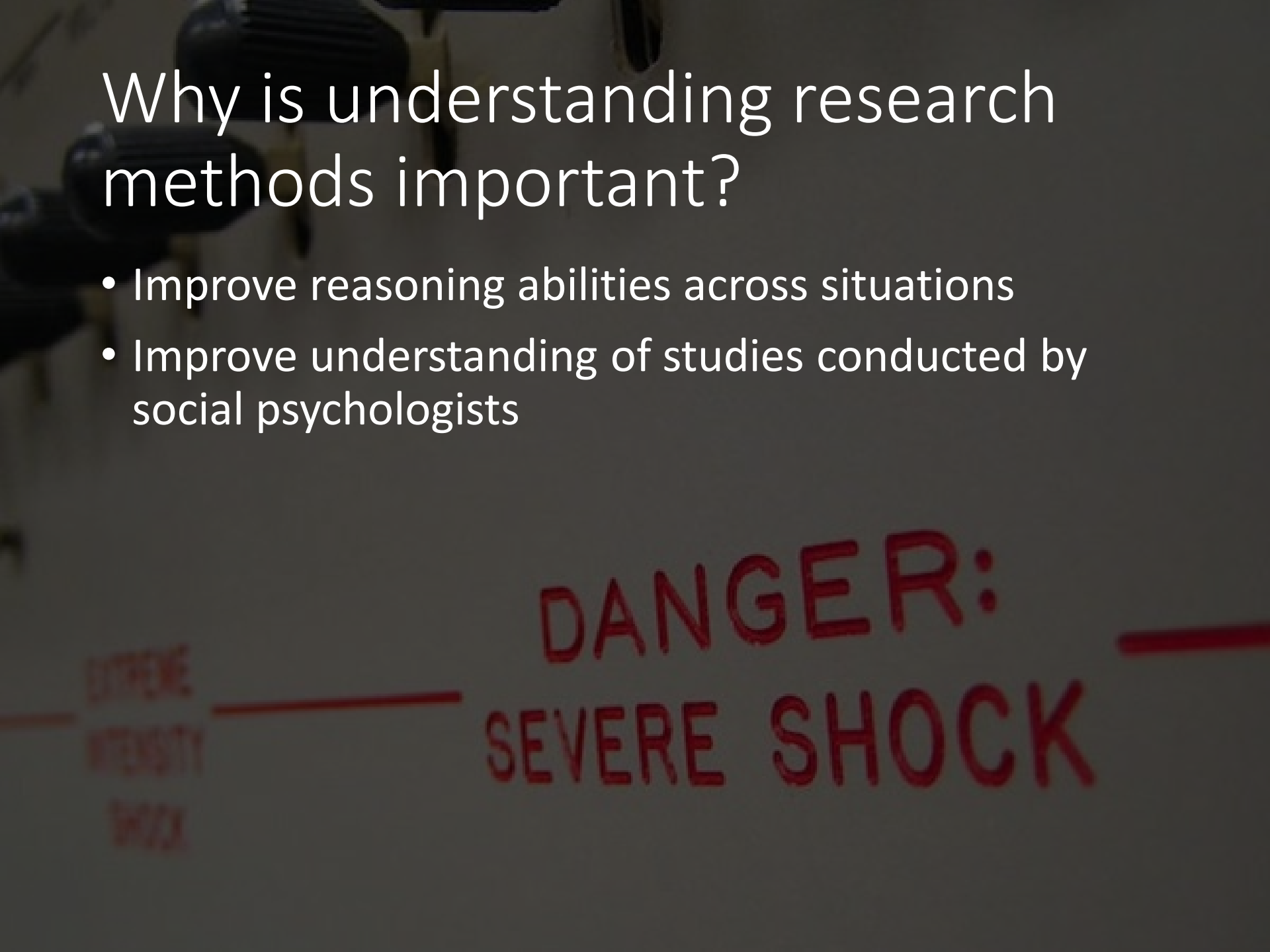
- **Scientific method:** Techniques used to develop and test predictions and then interpret and report results
  - Basic vs. applied research

What is the scientific method?

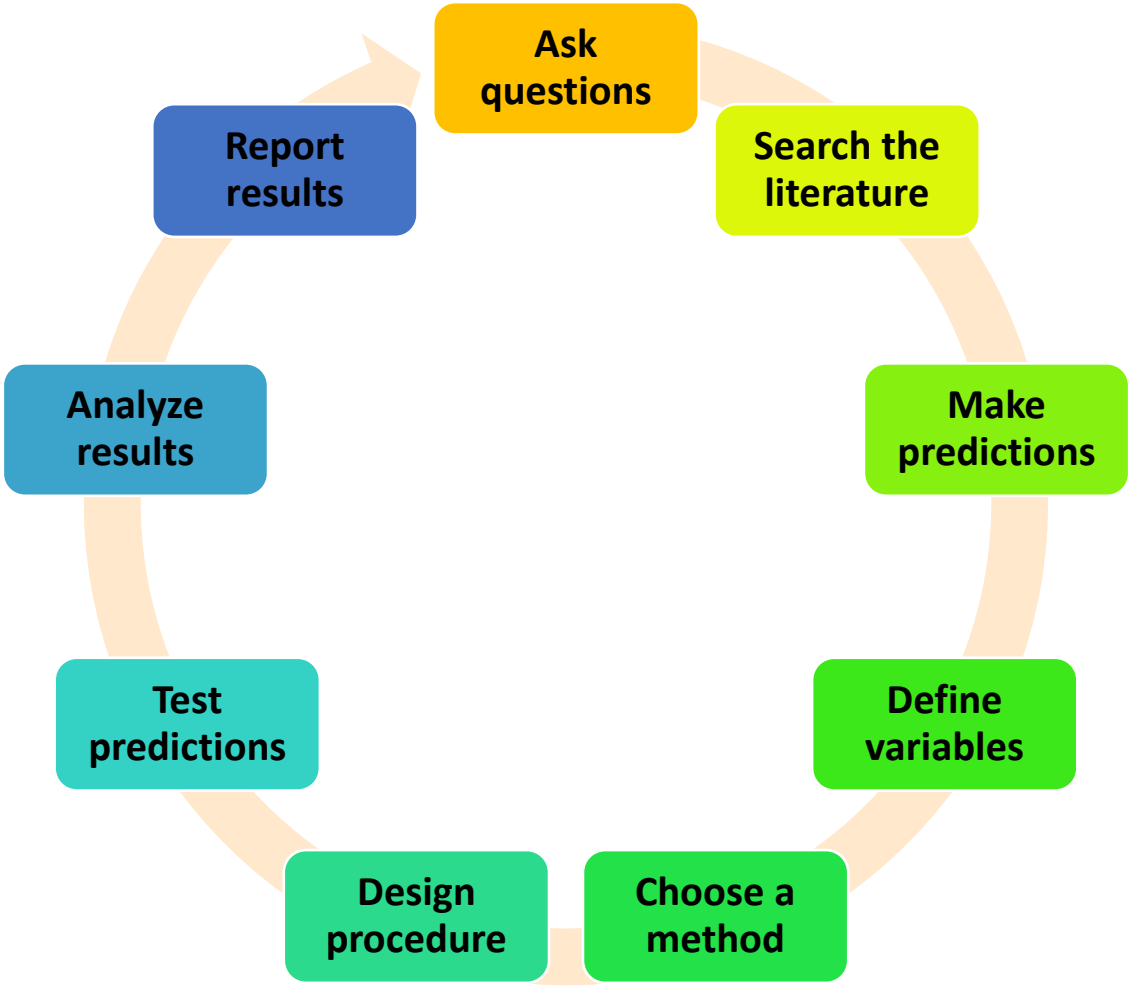


Why is understanding research methods important?

- Improve reasoning abilities across situations
- Improve understanding of studies conducted by social psychologists



What is the scientific method?



What is the scientific method?

- **Hypothesis:** The conditions under when some event will occur
- **Theory:** An organized set of principles that explain phenomena
- **Operational definition:** The specific procedures for measuring or manipulating a variable

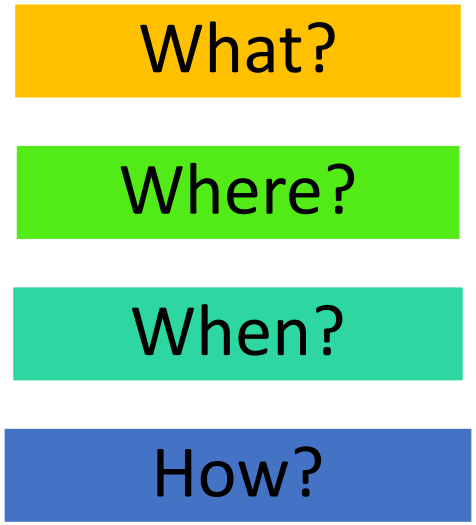
What is the scientific method?

- **Hypothesis**
  - Students are more likely to become friends with the classmates sitting next to them than those who do not.
- **Operational definition**
  - Students = SIUE PSYC 206-002 Spring 2022 students with a C or above
  - Friends = Yes/no item
  - Next = Adjacent seats that are no more than 10 feet away

What is descriptive research?

What is descriptive research?

- **Descriptive research:** Describes people's attitudes and behaviors
  - Often the initial step before correlational, experimental, and/or meta-analysis



What is descriptive research?

- **Observational studies:** Watching and observing behavior (covertly or overtly)

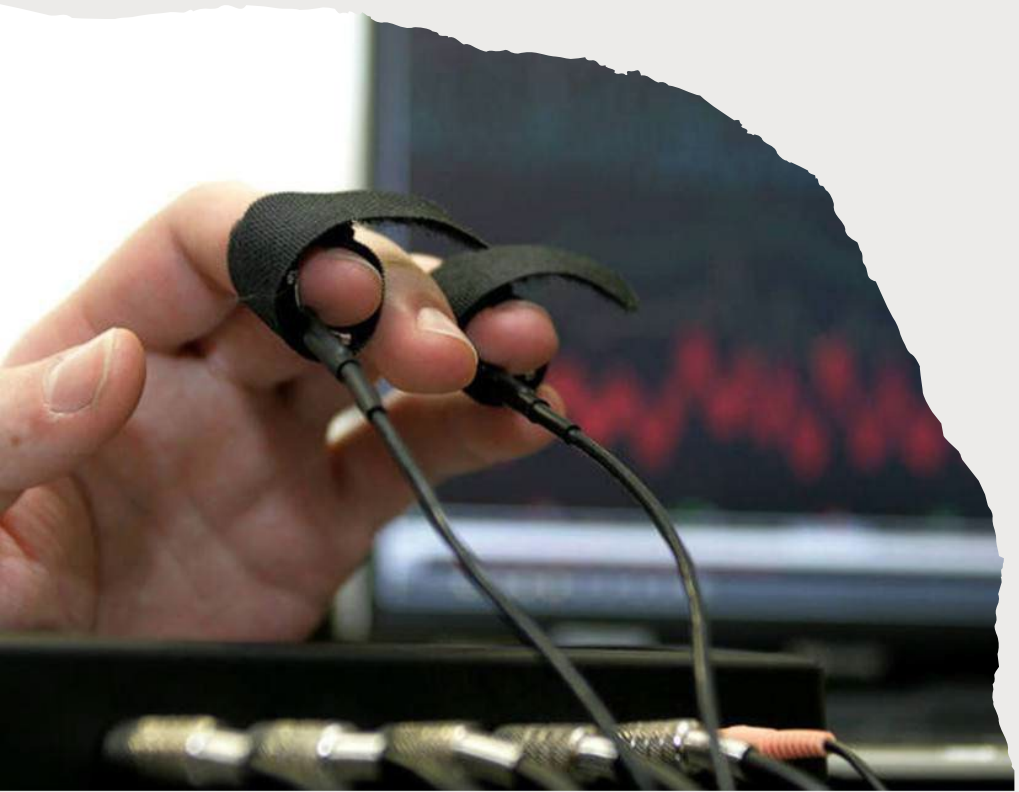
What is descriptive research?

- **Self-report surveys:** Ask participants about their thoughts and behaviors

What is descriptive research?

- Considerations:
  - **Reliability:** The consistency of a measure
    - **Inter-rater reliability:** The consistency of ratings provided by multiple raters

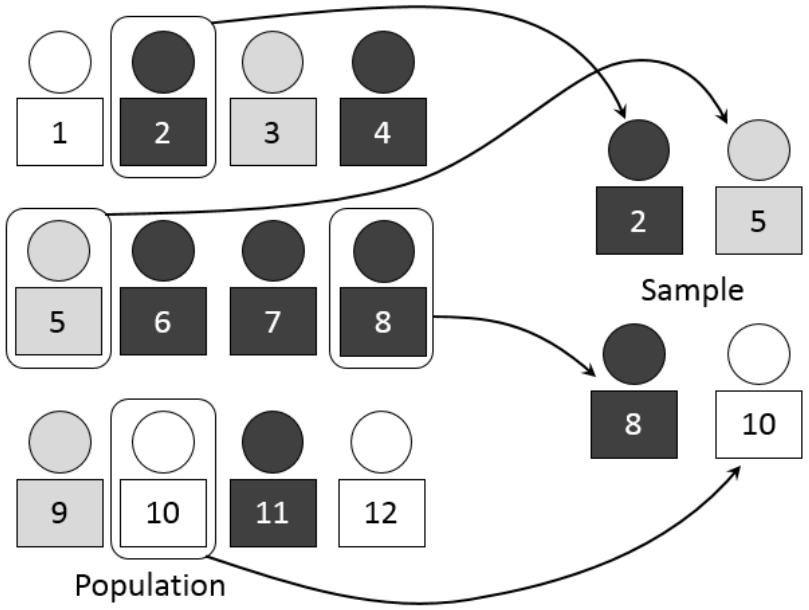
What is descriptive research?



- Considerations:
  - **Validity:** The accuracy of a measure
  - **Bogus pipeline technique:** Leading participants to believe their responses will be verified by a lie detector

What is descriptive research?

- Considerations:
  - Representativeness
  - **Random sampling:** Everyone in the population has an equal chance of being selected to participate



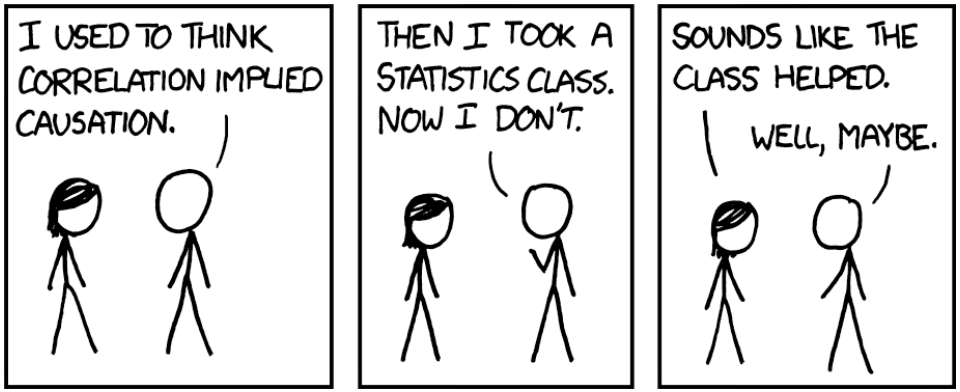
What is descriptive research?

- **Archival studies:** Examining records of past behaviors and cultural and historical trends

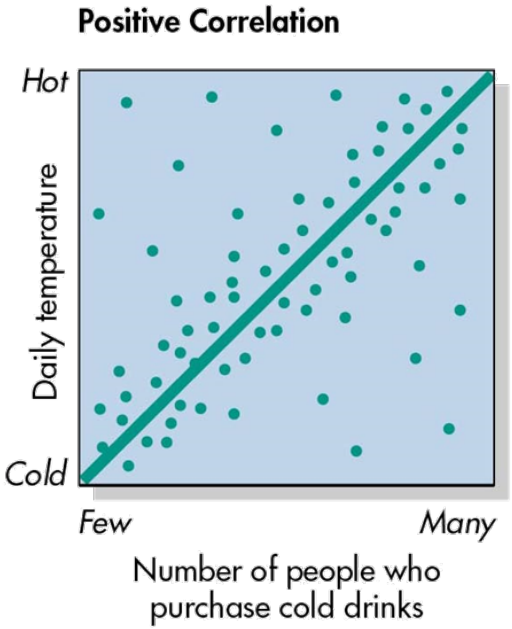
What is correlational research?

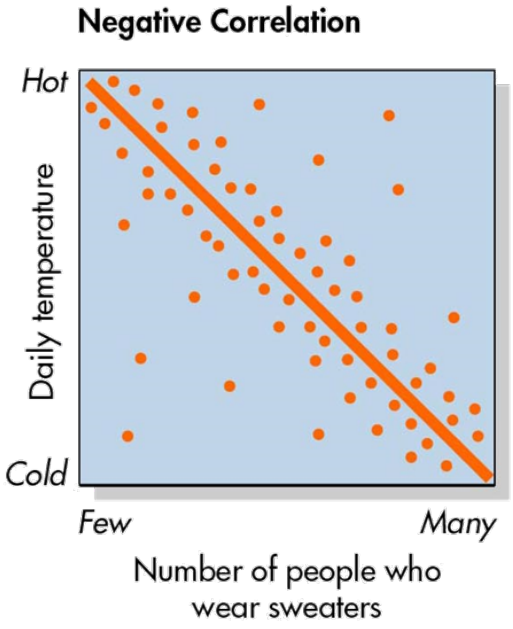
What is correlational research?

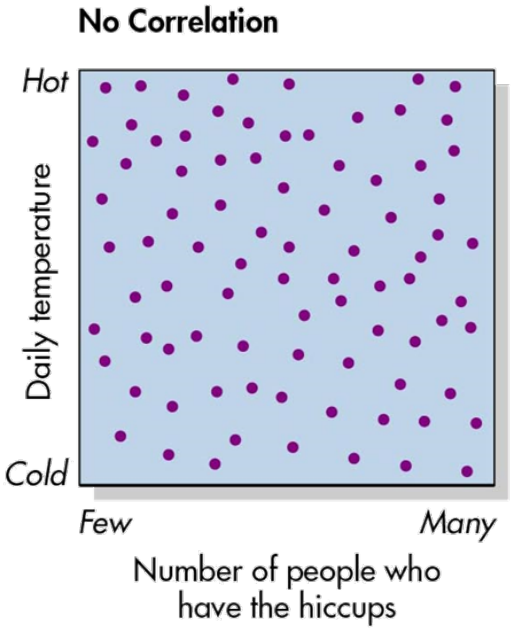
- **Correlational research:** Measures the strength and direction of the relationship between two or more variables as they exist naturally
  - Does not involve manipulation of the variables & cannot determine causation



What is correlational research?







r = 1.0

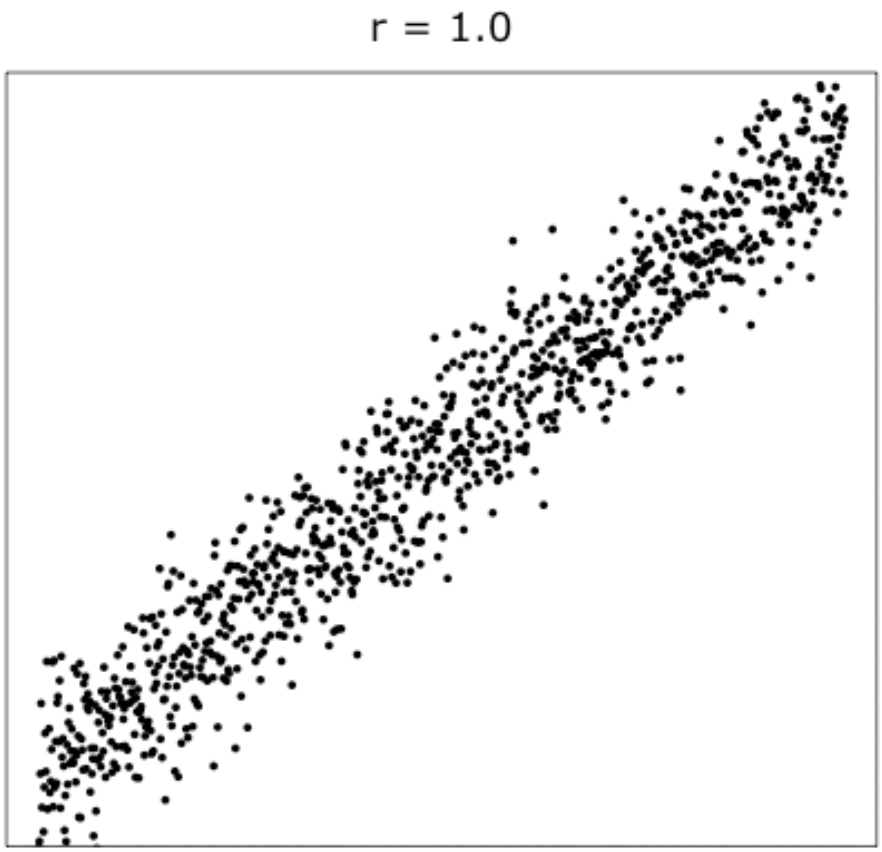
r = -1.0

r = 0.0

What is correlational research?

- **Correlation coefficient:** A statistic that describes the strength and direction of the relationship between two or more variables
  - Ranges from -1 to +1
  - Number closer to 0 = weaker
  - Number closer to 1 = stronger
  - Positive = same direction
  - Negative = different directions

What is correlational research?

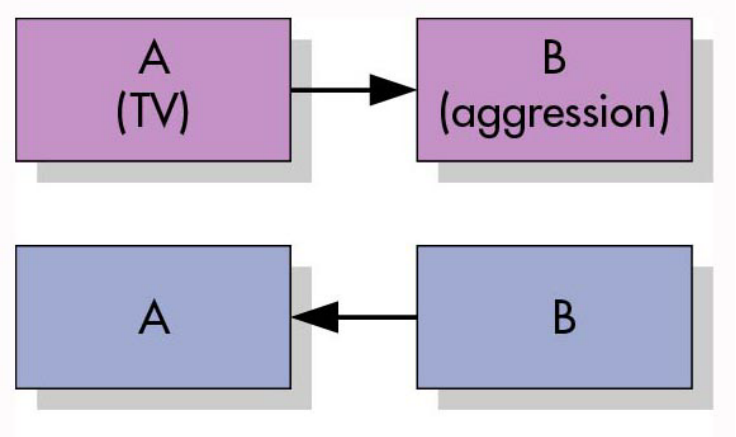


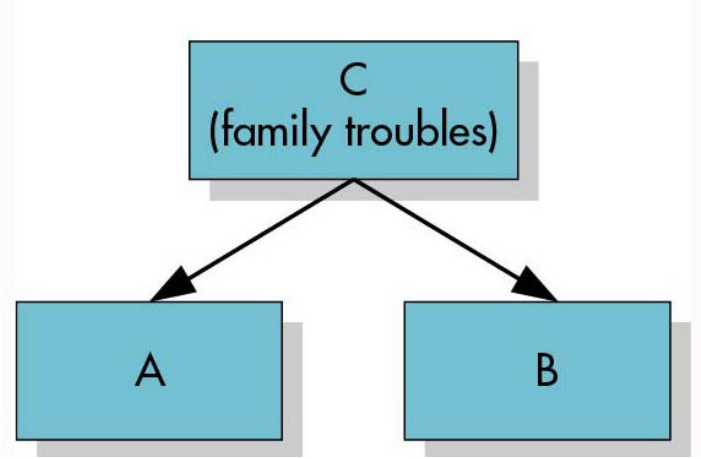
What is correlational research?

- Advantages:
  - “Easier” than experimental research
  - Laboratory and applied settings
  - Allows for the study of variables that cannot be manipulated

What is correlational research?

- Disadvantages:
  - Correlation ≠ causation!
  - Does not rule out extraneous variables





What is experimental research?

What is experimental research?

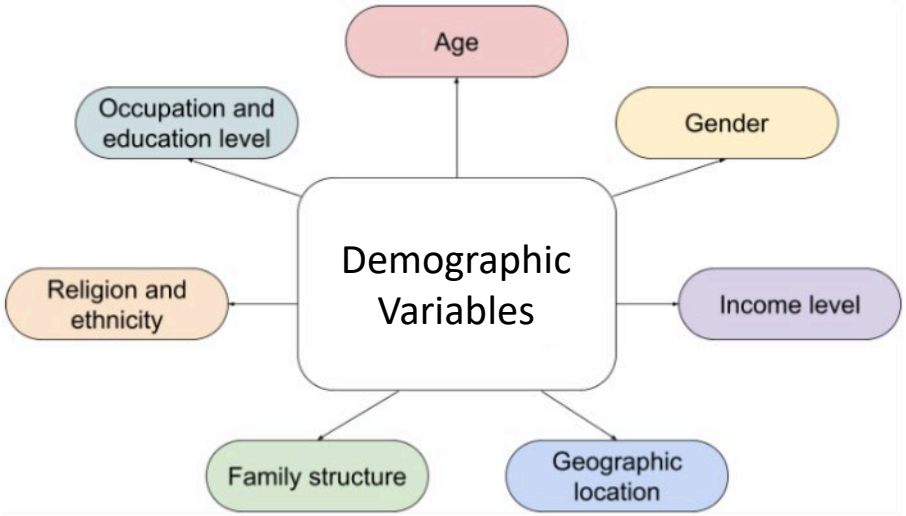
- **Experimental research:** Investigates cause-and-effect relationships
  - **Random assignment:** Every participant has an equal chance of being selected for the experimental group
  - **Control group:** Participants who are exposed to the usual/typical condition but not the manipulation
  - Manipulation of independent variable (IV)
  - Measurement of dependent variable (DV)

What is experimental research?

- Statistical significance determines whether group differences are meaningful
  - p < (less than) 0.05 =
    - Would occur by chance *less* than 5 times out of 100
    - Probably due to *manipulation*
  - p > (more than) 0.05 =
    - Would occur by chance *more* than 5 times out of 100
    - Probably due to *chance*

What is experimental research?

- **Subject variable:** Unique to each individual and cannot be manipulated
- **Confounding variable:** An extraneous variable that could have influenced the results



What is experimental research?

- **Internal validity:** Represents the extent to which we can be confident that the manipulation of the IV is the actual cause of the change in the DV
  - Threatened by confounding variables and experimenter expectancy effects
  - Use control groups, blind conditions, and random assignment

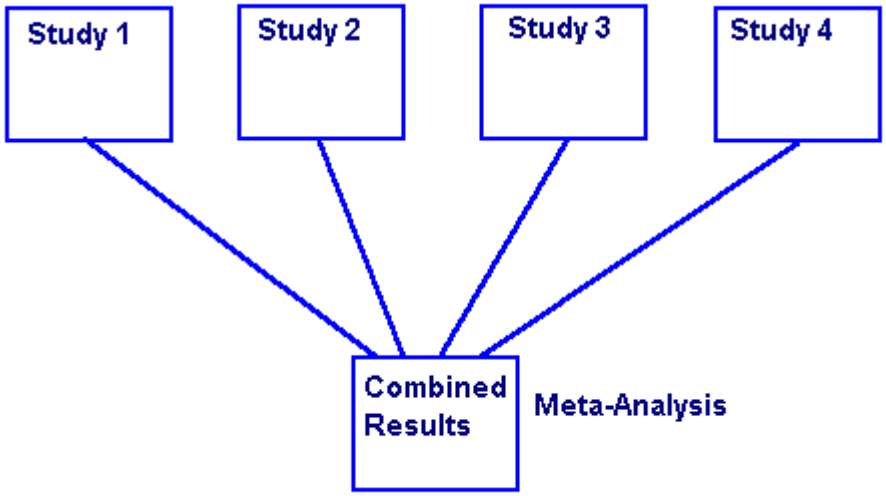
What is experimental research?

- **External validity:** Represents the extent to which we can be confident that the results can be generalized to other people and other situations
  - Threatened by non-representative samples and unfamiliar research settings
  - Use **random sampling** and create a realistic environment
  - Be careful with using deception or confederates

What is a meta-analysis?

What is meta-analysis?

- **Meta-analysis:** A complex set of statistical procedures that analyze the data produced by multiple studies



What is meta-analysis?

- Measures overall reliability and strength of effects
- Measures strength of effects
- Includes a variety of situations
- Includes a variety of samples
- Includes a variety of research designs