Advanced Correlational Studies

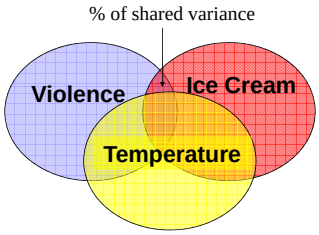
- *Unique* relation of variables to each other
- Three or more variables
  - usually continuous
  - can be categorical (race, gender, etc.)
- Can NOT determine causal effects, but can *predict* score on one variable based on scores on other variables

- "Sleep deprivation, intelligence, and study time all predict unique variance in GPA"
- **OR** "Sleep deprivation predicts GPA controlling for intelligence and study time"
- Can examine which one predicts the outcome the best
- The magnitude of each predictor ***controls for*** the magnitude of the other predictors.

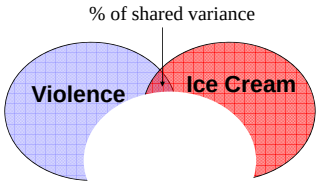
What does "_____" mean?

- Variance explained by a competing variable is held constant
- Ex. Violent crimes and ice cream sales
  - "Controlling for" regional temperature
  - Are ice cream sales related to violent crimes when the temperature is always the same?

In other words…



Controlling for temperature…



Are ice cream sales related to violent crimes when the temperature is always the same?

Hypothesis

- The association between two variables is mediated by a third variable
- Answers WHY the two variables are related; “causal explanation”
- Ex. Consumption of violent media and aggression are positively related
- Mediated by…?

Hypothesis

- The association between two variables is moderated by a third variable
- Answers WHEN and FOR WHOM this association is stronger than others
- Ex. Consumption of violent media and aggression are positively related
- Moderated by…?