Week 6: Experiments and More Controlled Comparisons

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Review

- Bivariate vs. Univariate Graphs
- Controlled Comparisons
- Other?
Dealing with Confounds

- Like you guys brought up, it almost seems like we can come up with an UNLIMITED number of potential confounds.
- But, what if there were no differences on those confounds?
- Studying and Grades (Binge Drinking Confound)
- Lipitor and Cholesterol (Exercise Confound)
- Vaccinations and Autism (...)

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Essentials of an Experiment

- Random Assignment into Treatment and Control Groups
- A treatment
- Observational Treatments
- That’s it!
Measuring Effects & Validity

- Pre-test measure?
- Pre-test and Post-test measure?
- What about Validity? Think bullseye again.
Measuring Effects & Validity

- Pre-test measure?
- Pre-test and Post-test measure?

- What about Validity? Think bullseye again.
- Internal Validity
- External Validity
Examples

- Corruption of Mexican Elections
- Aderol & Grades
- Singing to a Plant
- Microcredit & Development
- Your idea to save the world
Observations

This is the type of data that we are working with in SPSS.

- ANES
- BLS, CPS, Census, etc.

- Can we randomly assign our excel spreadsheet an aspirin? What about ourselves?
Controlled Comparisons

- Compare Similar Cases – This is Qualitative Studies work: Ethnography, Early Sociology, Economic History, Early Public Health.
- With categorical data, this is JUST the three way cross-tab we undertook last week.
Why Sample?

- Want to say something about a large group of people.
- We’re limited in budget, or limited in time.
- Pick a small number of units, and use them to talk about a large number of units.
- Think about sampling for a coin of unknown distribution.
Good Samples

- Representative of the Populations to be Generalized to
  - Balance on Covariates
  - Need not be the general population
- Random Selection of Respondents, but it’s hard!
  - Stratified Random Sample
  - Quota Sampling
  - Convenience Sampling
Words

- Population
- Parameter
- Sample Statistic

- Coming up next, Confidence Intervals, and Finally Inference
Words

- Population
  - Group to which we want to generalize
- Parameter
  - Characteristic We are interested in
    - Religiosity; Democracy; & era
- Sample Statistic
  - A Characteristic of a Sample

- Coming up next, Confidence Intervals, and Finally Inference