Chapter 8

Experiments

The Classical Experiment

- Independent variable is usually the experimental stimulus and it is a dichotomous variable

- Example: level of prejudice against African-Americans = dependent variable

- Independent variable= Exposure to history film about contributions

Pretesting & Posttesting

- Pretesting: The measurement of a dependent variable among subjects before they are exposed to a stimulus representing an independent variable

- Posttest: The remeasurement of a dependent variable among subjects after they've been exposed to a stimulus representing an independent variable

Problem of Validity

- If scores improve, can we be sure that it is due to the independent variable stimulus?

- Solution: Experimental and Control Groups

Control Groups

- A group of subjects to whom no experimental stimulus is administered and who resemble the experimental group in all other respects.

- By comparing the control group and experimental group at the end of the experiment points to the effect of the experimental stimulus.

Selecting Subjects for Experiments

- Probability Sampling NOT Used: WHY?

- Representativeness of probability sampling is a function of the sample size: need 100

- Experiments are not usually big, so probability sampling is not used

Randomization

- Recruit a group of people to take part in an experiment, and assign them randomly to the experimental group and the control group

Matching Groups

- Group of students, some are Hispanic some are white, we might equally distribute them between the control and experimental groups

- The overall average description of the experimental group is the same as the control group

Validity Issues in Experimental Designs

- Internal Invalidity

- Definition: refers to the possibility that the conclusions drawn from experimental results may not accurately reflect what has gone on in the experiment itself.

7 Types of Internal Invalidity

1. History
2. Maturation
3. Instrumentation
4. Statistical Regression: Regression toward the mean
5. Selection Bias
6. Experimental Mortality
7. Demoralization

Example a of Natural Experiment

- Mount Laurel, N.J.
    - Affordable housing court ordered
    - Low income who moved in vs. those who didn't

Ethics and Experiments

- Almost always involve deception
  - Is it essential to the experiment?
  - Does the value of what may be learned from the experiment justify the ethical violation?

- Must balance potential value of the research against potential damage to the subjects