Variables & Comparisons

Analyzing Human Behavior

- Social sciences also called soft sciences
- No such thing as THE ANSWER
- Find what is MOST PROBABLE
- Rely on ***statistics*** instead of standard equations

A set of mathematical procedures for organizing, summarizing and interpreting information

_____ vs. _____

- _____
  - Def: The set of all individuals of interest
  - Ex. All teenagers in relationships
- _____
  - Def: A set of individuals selected from a population in a research study
  - Ex. 300 American teenagers in relationships

Theory of _____

- Need to be able to generalize to the population
  - Statistical analyses allow us to do this
  - Indicators in analyses tell us whether we can or not
- Must be representative of population
- Similar idea to measuring a construct
  - Sample "taps into" population accurately

Types of sampling

- ***Random***
- _____
  - randomly sample from groups of interest
- ***Cluster***
  - sample group rather than individuals
- _____
  - sample p's who are readily available
- ***Quota***
  - representative proportions

_____

- Def: A value that describes the population
  - Ex. The average household income in the United States
  - Problem: This number is difficult to get
- Researchers obtain a ***statistic*** from the sample to estimate a population parameter
  - Ex. Average income of 10,000 American households from a random sample

_____ **vs.** _____

- _____ ***statistics***
  - Used to simplify data
  - Ex. Average number of cigarettes smoked in a sample of EKU students
- _____ ***statistics***
  - Used to make generalizations from sample to population
  - Ex. Differences in smoking between men and women at EKU → difference between men and women everywhere?

Problem with _____Stats

- There will always be a difference between the sample statistic and the population parameter
- Difference = _____
- Most often seen in political polls
  - Ex. “Approval rating has a sampling error of ± 3 percentage points”

_____

A characteristic or condition that changes or has different values for different individuals

Discrete vs. _____ Variables

- ***Discrete***
  - Separate categories or whole numbers
  - No “in between” numbers
- _____
  - Based on a range of values
  - Ex. Hormone levels in the sample

_____ Variables

- _____
  - Separate categories only
  - Ex. Who is still alive in the sample?
- All statistical analyses involve knowing the difference between categorical and continuous variables

Rules for _____ Variables

- Must be able to find a value BETWEEN two scores on the scale
- Rarely going to find someone who scores exactly the same as someone else
- The obtained measurement should be thought of as an interval rather than an exact point on the scale

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. Employees who participate in the retention program will show significantly more job satisfaction than employees who do not