




Descriptive and Correlational Research




Descriptive Studies



- 
- Used to gain information, NOT test hypotheses
 - Prevalence or frequency of a behavior in a population
 - One continuous variable
 - Simple count
 - Percent
 - Average amount
 - Often used as preliminary data




- Definition: Selection of participants
- Must be representative of population




Types of sampling procedures

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





Measures

- Naturalistic observation
- Participant observation
- Contrived observation
- Disguised vs. nondisguised
- Checklists and tally sheets used



Correlational Studies

- 
- Relation of variables to each other
 - Two continuous variables
 - Can NOT determine causal effects

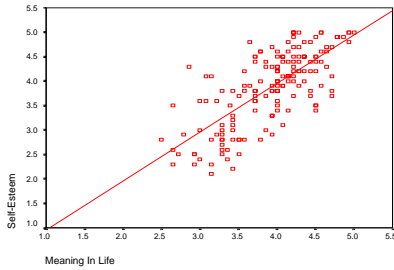
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- ## Examples of Correlational
- Smoking is positively associated with physical illness
 - Watching TV is negatively associated with college GPA
 - Regional temperature is positively associated with violent crimes

Determining

- Scatterplots
- Pearson's r
 - Range: +1 to -1
 - r^2 (coefficient of determination): percent of variance shared between variables
 - influenced by sample size
 - .10 is weak, .30 is moderate, .50 is strong

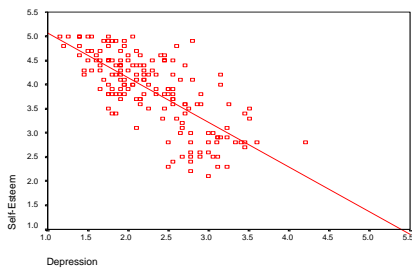
Correlation

- Scores on one variable increase as scores on the other variable increase



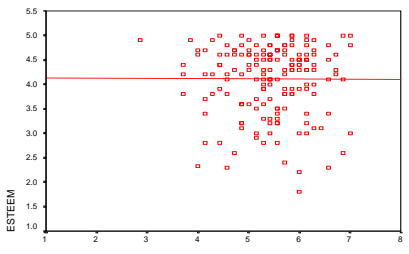
Correlation

- Scores on one variable increase as scores on the other variable decrease



Correlation

- Scores on one variable don't have any relation to scores on the other variable



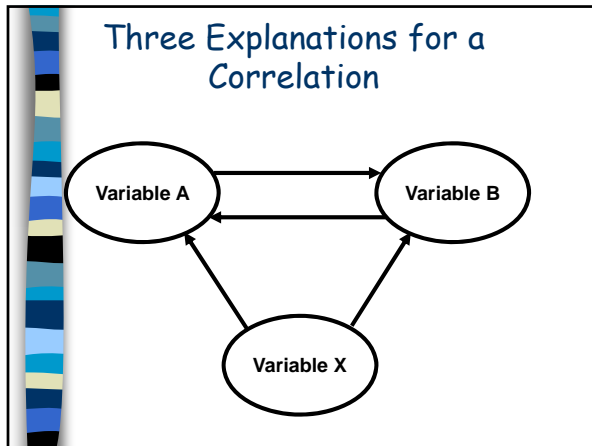
The scatter plot displays 'ESTEEM' on the y-axis (ranging from 1.0 to 5.5) and 'davis empathy' on the x-axis (ranging from 1 to 8). A horizontal red line is drawn at y = 4.0. The data points are scattered randomly around this line, indicating no correlation between the two variables.

Factors that influence of correlations

- Restricted range / variance of scores
- Low reliability of measures
- Outliers
- Sample size influences significance

Pros and Cons

- Pros
 - Can determine the unique relation of two variables
 - Mediation and moderation effects
- Cons
 - Can't determine direction of causation
 - Effects of outliers on magnitude



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

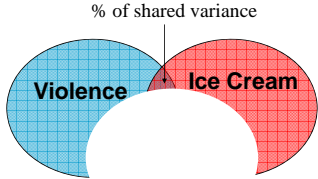
Hypothesis

- "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?

Controlling for temperature...



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