Quiz One Review

INTRO AND CHAPTER 1 (Picturing Distributions with Graphs

Qualitative vs Quantitative Research
Divide in Social Science
Individual (unit of analysis): People, animals or things.
Variable – description/measurement of an individual.
Descriptive statistics – summarizing the data
Inferential statistics – generalizing findings.
Statistic/Sample
Parameter/Population
Randomization and Bias

Variable Types - Categorical and Quantitative (nominal, ordinal, continuous/interval) (dichotomous).

Univariate vs Bivariate

PICTURING DISTRIBUTIONS
Display Categorical: **Bar Graph/Pie Graph**
Display Quant: **Histogram/Stemplot/Box Plot**

CHAPTER 2 (Describing Distributions with Numbers

DESCRIBING DISTRIBUTIONS
Quantitative Variable Description: **Center, Spread, and Shape**

Center: Mean, Median, Mode
Spread/Variability:
Standard Deviation vs. 5 # summary
Calculating the mean and st dev (and variance)
Finding the 5 # summary and box plot
Interquartile Range (IQR)
Shape: Symmetric or Skewed –
Unimodal, Bi-Modal, Multimodal (Bell Shaped)
Any outliers?

When to use Mean vs Median

CHAPTER 3 (The Normal Distributions)

Normal Distributions
Uni-modal, symmetric, bell-shaped (mean/median are the same)
Using the **68, 95, 99.7 rule**

Be able to draw & label a normal distribution

Density Curve = 1 or 100 percent.
Area under the curve=100%

Calculating a Standard Score/z-score
Using formula to calculate z-score
Using Table A to convert to percentiles

CHAPTERS 4 and 5 (Scatterplots, Correlation, and Regression Lines)

Bivariate Analysis (relationship between two variables)

When comparing two quantitative variables…
(Are two variables **associated/related?)**

Display relationship with…**Scatterplot**
Explanatory Variable (x-axis): (independent/causal)
Response Variable (y-axis): (dependent/effect)
Describe relationship with…
Regression (trend line)
(line that is closest to all points – shows the trend/relationship)
Correlation Coefficient
(ranges from -1 to +1)

Relationship Qualities: Form/Direction/Strength
Form: (Linear, Curvilinear, Diffuse)
Direction: (Positive or Negative)
Strength: (Weak/Moderate/Strong)

Outliers strong effect on correlation coefficient

Lurking Variables: third variable influence