

AP Psychology Statistics Terms

- 1) **Statistics**- is a branch of mathematics that psychologists use to organize and analyze data
- 2) **Descriptive Statistics**- are used to organize and summarize data.
- 3) **Inferential Statistics**- are designed to help one draw conclusions from a set of data.

Scales of Measurement

- 4) **Nominal Scale**- is a set of categories for classifying objects. (classifying the class by eye color)
- 5) **Ordinal Scale**- is a scale indicating order or relative position of items according to some criterion. (listing horses in the order that they finished a race)
- 6) **Interval Scale**- is a scale with equal distances between the points or values, but without a true zero. (thermometer)
- 7) **Ratio Scale**- is a scale with equal distances between the points or values and with a true zero. (measuring snow fall over several days)

Measurements of Central Tendency

- 8) **Central Tendency**- is the tendency of scores to congregate around some middle value.
- 9) **Mean**- is the arithmetical average calculated by dividing a sum of values by the total number of cases.
- 10) **Median**- is the point that divides a set of scores in half.
- 11) **Mode**- is the point at which the largest number of scores occurs.

Distribution

- 12) **Frequency Distribution**- is a count of the number of scores that fall within each of a series of intervals.
- 13) **Frequency Histogram**- is a type of bar graph that shows frequency distributions.
- 14) **Frequency Polygon**- is a type of line graph that shows frequency distributions.
- 15) **Normal Curve**- is the hypothetical bell-shaped distribution curve that occurs when a normal distribution is plotted as a frequency polygon.
- 16) **Skewed Distribution**- If a frequency distribution is asymmetrical- if most of the scores are gathered at either the high end or the low end- the frequency polygon will be skewed.

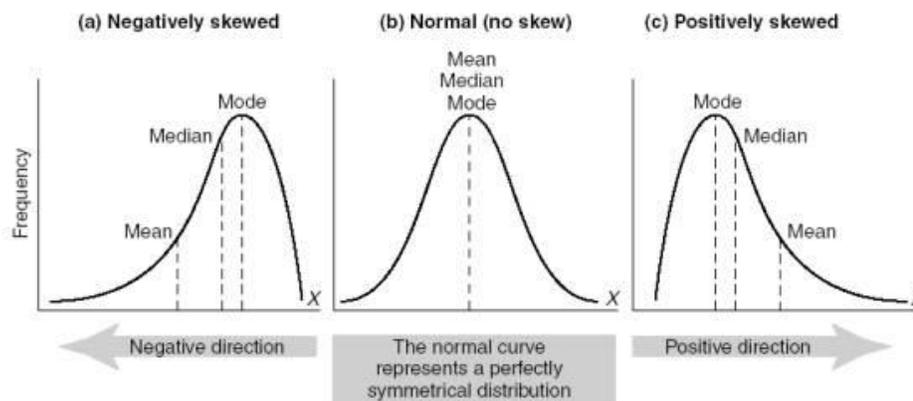
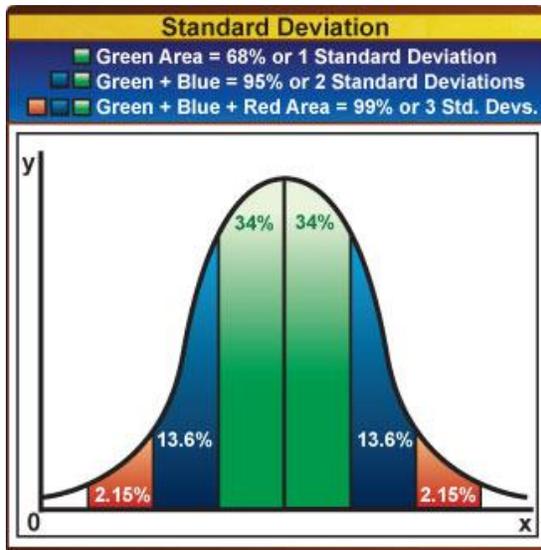


FIGURE 15.6 Examples of normal and skewed distributions

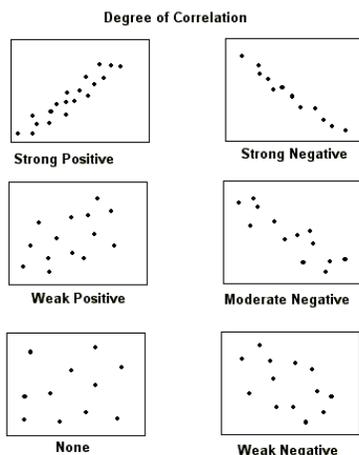
Measures of Variation

- 17) **Range**- is the difference between the largest and smallest measurements in a distribution.
- 18) **Standard Deviation**- is a statistical measure of variability in a group of scores or other values



Measures of Correlation

- 19) **Scatter Plot**- is a diagram showing the association between scores on two variables
- 20) **Correlation Coefficient**- is a statistical measure of the strength of association between two variables. (can run from +1.0 to -1.0)



- 21) **Illusory correlation**- is a belief that two things are associated when there is no actual association.

Using Statistics to Make Predictions

- 22) **Significance (level)**- is probability that results obtained were due to chance (significance level at .05, he or she knows that there are 19 chances out of 20 that the results are not due to chance (1 chance in 20 (5 in 100) that results are due to chance) (significance level at .01 would mean that there is only 1 chance in 100 that the results are due to chance)
- 23) **Meta-Analysis**- is a statistical procedure for combining the results of several studies so the strength, consistency, and direction of the effect can be estimated. (One can conclude that genders differ in depression by ___ percentage across multiple studies)