

Descriptive statistics refers to the methods used to summarize, organize, and present data in a simplified and meaningful way.

1. Measures of Central Tendency

These are measures that represent the central or typical value of a data set.

-Mean (Average):

The sum of all data values divided by the number of values.

-Median:

The middle value when data is ordered from smallest to largest.

If there's an even number of data points, the median is the average of the two middle values.

-Mode:

The value that has highest frequency in a data set.

A data set may have one mode (unimodal), more than one mode (bimodal, multimodal), or no mode.

2. Measures of Dispersion or Variability

These measures describe the spread of data points around the central tendency.

-Range:

The difference between the largest and smallest values in the data set.

-Variance:

A measure of how much the data values deviate from the mean.

-Standard Deviation:

The square root of the variance.

3. Quartiles

Quartiles divide the data into four equal parts, providing insights into the spread and central location of the data.

Q1 (First Quartile):

The median of the lower half of the data. It marks 25%

Q2 (Second Quartile or Median):

The median of the data set. It marks 50%

Q3 (Third Quartile):

The median of the upper half of the data. It marks 75%

Interquartile Range (IQR):

The difference between Q3 and Q1. It represents the range within which the central 50% of the data lies.