Descriptive Statistics in Healthcare Research

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Types of Statistics

Descriptive

Inferential
Descriptive Statistics

Uses data to describe of the study population, through numerical calculations, tables or graphs

• Central tendency (location)
  • Mean
  • Median
  • Mode

• Variation (dispersion)
  • Range
  • Interquartile range
  • Standard deviation
What’s the **AVERAGE** cost of a house in this neighborhood?

**Mean** value: $1,009,000
What’s the **TYPICAL** cost of a house in this neighborhood?

**Median value:** $10,000
Mode

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

What’s the **MOST COMMON** response to the statement “I enjoy eating French fries.”

5 6 5 4 3 3 5 5 6

**Mode value:** 5
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  - Standard deviation
Range

• Simplest way to describe variation in data
  • Range = Max – Min

• Very sensitive to outliers (data that doesn’t fit the pattern)
Interquartile range (IQR)

Used to find and account for data outliers

- Identifies and “throws out” data points that are too far from the median
- Focuses on the middle 50% of data
Standard Deviation (SD)

Estimates the average distance of each score from the mean

• Large standard deviation
  • Less concentrated
  • Lower confidence in mean

• Small standard deviation
  • More concentrated
  • Greater confidence in mean
TO DO

Module 4 Quiz

Optional videos on study design