

I . Short Review

1. Level of measurement (Variables)

- Discrete (Categorical or Qualitative)
Nominal : The categories have no intrinsic order. ex) Religion
Ordinal : The categories have an intrinsic order. ex) good, better, best
- Continuous (Quantitative)
Ratio : Having true zero -> makes the ratio meaningful. ex) twice income
Interval : the zero point is arbitrary. ex) thermometer.

2. Dependent and Independent

3. Measure of Central Tendency

- Mode : most frequently occurring single value ; Nominal, Ordinal, Interval, Ratio
- Median (50 percentile): the value of the middle observation. (not sensitive to extreme values) ; Ordinal, Interval, Ratio (* odd and even)

$$\frac{N + 1}{2}$$

- (Arithmetic)Mean (μ or \bar{X}): $\frac{\sum X}{N}$; Interval, Ratio

II. STATA

- Data file : **.dta
- Stata Window : Main window, Review window, and variable window.
- Recommend using “Do” file.
- Important command : “**describe**”, “**Summarize**”, “**Tabulate**” “**Label list**”, and “**Help**”

III. Problems

Find which level of measurement, median, mode , and mean

- 1) the result of asking 30 people how many brothers and sisters they had

2 1 1 2 0 1 0 3 2 0 1 1 5 1 2 2 2 1 1 3 0 2 4 0 0 2 1 0 1 2

- 2) The result of asking Social class (1 = low, 2 = middle, 3 = high)

1 2 1 2 3 1 1 2 2 2 3 2 2 2 1 3 1 3 1 2 2 1 3 2 1 2 1 2 3 2

- 3) The result of marital status (1 = single, 2 = married, 3= divorce)

3 3 1 1 1 1 1 2 2 2 3 2 1 2 1 2 2 3 2 2 3 1 2 1 1 1 3 3 2 1