

Measures of Central Tendency

Measure	Definition	Appropriate if ...
Mean	“Center of gravity” $\bar{Y} = \frac{\sum Y_i}{n}$	Interval (unless skew)
Median	Middle measurement of ordered sample	Interval (if skew), Ordinal
Mode	The most frequently occurring value	Interval (if extreme or threshold), Ordinal (if skewed); Nominal (!)

MEASURES OF DISPERSION

Measure	Definition	Appropriate if...
Range	Difference between smallest and largest measurement	Ordinal
IQR	Width of the middle 50% Diff btwn 25 th & 75 th percentile	Interval (if skew); Ordinal
(Variance)	$s^2 = \frac{\sum (Y_i - \bar{Y})^2}{n - 1}$	Don't use for Dispersion
Standard Deviation	$s = \sqrt{s^2} = \sqrt{\frac{\sum (Y_i - \bar{Y})^2}{n - 1}}$	Interval (only!)
Variation Ratio	% of sample that is non-modal; 100% - the % that is the mode; Sum of all non-modal rel. freq's	Nominal (!)