Symbols

Symbols for various sample statistics and the corresponding population parameters.

Sample	Population	Description
n	N	Size/Number of Members
$\bar{x}$	μ	Mean
$\hat{p}$	p	Proportion

Symbols and Formulas

Symbols	Description
f	Frequency
f/N	Relative frequency
Σ	Summation
$\bar{x} = \frac{\sum x}{n}$	Mean of sample
$\mu = \frac{\sum x}{N}$	Mean of population
$\frac{n+1}{2}$	Median (Odd data set)
$\frac{x_{\frac{n}{2}} + x_{\frac{n}{2}+1}}{2}$	Median (Even data set)
$x_i - \bar{x}$	Deviation from mean
$\frac{\sum(x_i - \bar{x})}{n} = 0$	Average deviation
$\lvert x_i - \bar{x} \rvert$	Absolute deviation
$\frac{\sum \lvert x_i - \bar{x} \rvert}{n}$	Average absolute deviation
$\frac{\sum(x_i - \bar{x})^2}{n}$	Variance
$\frac{\sum(x_i - \bar{x})^2}{n-1}$	Sample variance (Bessel's Correction)
$\sigma = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n}}$	Standard deviation

$\sigma = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n-1}}$	Sample standard deviation (Bessel's Correction)
$s = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n-1}} \approx \sigma = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n}}$	Sample standard deviation $\approx$ Standard deviation of population
$z = \frac{(\mu - x)}{\sigma}$	Number of Standard deviations away from the mean
$z = \frac{(x - \mu)}{\sigma}$	Z Score - Number of Standard deviations any value is away from the mean