

## Vocabulary for Intro to Research & Statistics

Must Know	Must Know for Analysis	Used Often	Good to Know
<b>Measurement</b> Numeric   Quantitative Categorical   Qualitative Construct & Concept	Unit [of measurement] Ordinal & Nominal Levels   Categories Operational Definition	Level of Measurement Dichotomous / Binary Composite / Index Variable / Scale & Scale items	Factor (Variable) Interval / Ratio / Scale Discrete & Continuous Reliability & Validity
<b>Statistics</b> , Descriptive Frequency Relative Frequency / Proportion / Percentage	Univariate & Bivariate & Multivariate High & Low   Max & Min Mean & Median & Mode	Point & Interval Estimates Confidence Interval Margin of Error Residuals & Fitted values	Cumulative Frequency Cumulative Percent Ratio / Odds-Ratio Central Tendency/ Center
<b>Distribution</b>   Shape Variation   Variance   Spread   Dispersion	Standard Deviation Symmetric   Symmetry Percentile / Quartile	Outliers & Skew[ness] Normal Distribution Z-Score / Location	Probability Distribution Standard Normal Distribution Standardized Values
<b>Data Table</b>   Dataset Variable = Columns Observation   Case = Rows Value = Cells	Unit of Analysis Valid & Missing Data Variable & Value Labels Code / Coded & Recode	Syntax   Code Numeric / Integer Type String   Character Type Codebook	Merge Aggregate Dummy Code Weight   Weighting
<b>Relationship</b> Causation   Causality	Independent Variable (IV) Dependent Variable (DV)	Effect & Effect Size Predictor & Response	Interaction Treatment & Outcome
<b>Sample</b> Population Inferential Statistics	Random   Probability Sample Representative Sample Statistic & Parameter	Independent Samples Paired   Dependent Samples Sampling Distribution	Generalization Sampling Error Standard Error (s.e., SE)
<b>Statistical Analysis</b> Correlation Cross-tabulation	[Statistically] Significant p-value Test statistic	Null Hypothesis ( $H_0$ ) Alternative Hypothesis ( $H_a$ ) alpha ( $\alpha$ )   Significance Level	Critical Value Type I & Type II Errors 1- & 2-Tailed Tests
<b>Chart   Graph</b> , Bar Histogram	Scatterplot Contingency (2-way) Table	Line Graph Box [& whisker] plot	Pivot Table Ogive
<b>*Notation*</b> $n/N$ = Sample/Population Size $\Sigma$ = Sum for each value	$x/y$ = Indep./Dep. Variable $\bar{x}/\bar{y}$ 'x/y bar' = Mean of x/y $s/sd$ = Sample Standard Dev.	$\hat{y}$ 'y hat' = Predicted value of y $\mu$ 'mu' = Population Mean $\sigma$ 'sigma' = Population Std. Dev.	$x_i/y_i$ = Each or any value of x/y $p/\pi$ = Sample/Pop. Proportion

| = near synonyms

/ = related or similar

& = often used together