Symbols

f = Frequency

cmf = cum frequency

% = percentage

$cm\%$ = cum percentage

K = Kurtosis

S = Standard deviation = SD

Σ = Sigma = sum

N = # of participants

M = mean
$\bar{X}$ = mean

r = correlation of coefficiant

IQR = Interquartral Range

p = Significance

r^2 = coefficient of determination

R = comparing 2^+ variables

$CI\%$ = confidence interval

SE_m = Standard error of measurement

Symbols

IV = independent variable

DV = dependent variable

H_0 = Null Hypothesis

H_a = Alternative Hypothesis

NRT = Norm-referenced Tests

CRT = criterion-referenced Tests

K = the number of levels for IV → ANOVA

η^2 = eta squared

d = eta squared

Research and Statistics Definitions

Achievement test – measures knowledge and skills individuals have acquired
   Exam

Aptitude test – designed to predict of specific type of achievement
   GRE

ANOVA – find the difference of 2 or more means
   Analysis of variance

Applied research – putting the theory into practice

Appraisal – gathering data

Basic research – looking to find info for a theory

Bell curve – normal distribution
   Positive scale – tale to the right
   Negative scale – tale to the left
   Bimodal distribution – 2 high points

Bivariate – 2 variables, chi square, correlational

Bias – when some types members have a greater chance of being picked

Census – when you get a whole population

Chi-Square – nominal data, shown by frequencies and percentages
   One way – participants classified in only one way
   Two way – participants classified in 2 ways

Cluster sampling – drawing groups instead of individuals

Confidence interval – where you know the mean lies with in. 68%, 95%, 98%

Confounded – something that effected research so its not pure

Construct – a collection of related behaviors that are associated in a meaningful way

ANOVA

	Sum of square	df	mean square	F	Sig
between	SST	K-1	$MST = \dfrac{SST}{K-1}$	$\dfrac{MST}{MSE}$	sig score
within	SSE	N-1	$MSE = \dfrac{SSE}{N-K}$		
total	TSS	N-1			

IV = factor

$$F = \frac{\text{treatment effect} + \text{difference do to chance}}{\text{difference do to chance}}$$

1. Test of Assumptions ⟶
2. Run ANOVA
3. Post Hoc

1. Independent obs
2. normality
3. Homogenity
4. random sampling

★ If significance is found
  ↳ ANOVA doesn't tell you where
      ↳ Post Hoc does

⟶