Parameters Studied in HS267

Unit	Parameter	Estimator	Derivation
Cohort Studies	RR (relative risk)	$\hat{RR}$	ratio of two "rates"
Case-Control Studies	OR (odds ratio)	$\hat{OR}$	ratio of two exposure odds
Inference on Variance	σ^2 (variance)	s^2	mean sum of squares
	σ^2_1 / σ^2_2	s^2_1 / s^2_2	ratio of two variances
	$\mu_1 - \mu_2$ (mean difference)	$\bar{x}_1 - \bar{x}_2$	mean difference
ANOVA	σ^2_B / σ^2_W §	s^2_B / s^2_W	ANOVA F statistic
	$\mu_i - \mu_j$	$\bar{x}_i - \bar{x}_j$	Post-hoc comparisons
Correlation	ρ (correlation coefficient)	r	Sum of cross-products
Regression	β (slope)	b	Least squares line

Additional notation:

n = group size

N = total sample size

α = type I error rate

α_B = alpha adjusted according to Bonferroni's method

$1 - \beta$ = probability of type II avoidance

p [value] = probability of current data assuming null hypothesis were true

p = population proportion (Binomial Parameter)

Graphical help:

Side-by-side boxplot - comparison of means and variances

Scatter plot - correlation and regression

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§ Used to test inequality of means in the population.