

HOW TO CHOOSE STATISTICAL TEST

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Number of Dependent Variables	Nature of Independent Variable(s) IV	Nature of Dependent Variable(s) DV	Test(s)
1	No IV (1 population)	continuous normal	one-sample t-test
		continuous not normal	one-sample median
		categorical (2 categories)	binomial test
		categorical	Chi-square goodness-of-fit
	1 categorical IV with 2 levels (independent groups)	continuous normal	independent sample t-test
		continuous not normal	Wilcoxon-Mann Whitney test
		categorical	Chi- square test
			Fisher's exact test
	1 categorical IV with 3 or more levels (independent groups)	continuous normal	one-way ANOVA
		continuous not normal	Kruskal Wallis
		categorical	Chi- square test
	1 categorical IV with 2 levels (dependent/matched groups)	continuous normal	paired t-test
		continuous not normal	Wilcoxon signed ranks test
		categorical	McNemar
	1 categorical IV with 3 or more levels (dependent/matched groups)	continuous normal	one-way repeated measures ANOVA
		continuous not normal	Friedman test
		categorical	repeated measures logistic regression
	2 or more IVs (independent groups)	continuous normal	factorial ANOVA
		continuous not normal	???
		categorical	factorial logistic regression
	1 continuous IV	continuous normal (IV must also normal)	correlation
			simple linear regression
		continuous not normal	non-parametric correlation
	1 or more continuous IVs and/or 1 or more categorical IVs	categorical (dichotomous)	simple logistic regression
		continuous normal	multiple regression
			analysis of covariance (ANCOVA)
		categorical	multiple logistic regression
			discriminant analysis
2 or more	1 categorical IV with 2 or more levels (independent groups)	continuous normal	one-way MANOVA
2 or more	2 or more IV	continuous normal	multivariate multiple linear regression
2 sets of 2 or more	No IV	continuous normal	canonical correlation
2 or more	No IV	continuous normal	factor analysis

Modified from source: <http://www.ats.ucla.edu/stat/stata/whatstat/default.htm>