

1 Dependent Variable & 0 IVs (1 Population)

DV	Test
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interval & normal	One-sample t-test tests if a sample mean differs sig. from a hypothesized value
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ordinal or interval	One-sample median test tests if a sample median differs sig. from a hypothesized value
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categorical (2 categories)	Binominal Test tests if the proportion of successes on a two-level categorical dependent variable differs sig. from a hypothesized value
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categorical	Chi-square goodness-of-fit tests if the observed proportions for a categorical variable differ from hypothesized proportions
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1 DV & 1IV with 2 levels (independent groups)

DV	Test
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interval & normal	2 independent sample t-test
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ordinal or interval	Wilcoxon-Mann Whitney test is a non-parametric analog to the independent samples t-test
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1 DV & 1IV with 2 levels (independent groups) (cont)

categorical	Chi-square test used, when you do not assume that the DV is a normally distributed interval variable
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categorical	Chi-square test to see if there is a relationship between 2 categorical variables
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categorical	Fischer's exact test assumes that each cell has an expected frequency of 5 or more
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categorical	Fischer's exact test same as Chi-square test, but can be used regardless of the expected frequency (expected frequency of 5 or less)
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1 DV & 1IV with 2 or more levels (indep. groups)

DV	Test
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interval & normal	One-Way ANOVA test for differences in the means of the DV broken down by the levels of the IV
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ordinal or interval	Kruskal Wallis test used when categorical IV (with one or more categories) an normally distributed interval DV
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ordinal or interval	Kruskal Wallis test is non-parametric version of ANOVA and a generalized form of the Mann-Whitney test since it permits two or more groups
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categorical	Chi-square test
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ordinal or interval	Kruskal Wallis test used when categorical IV (with one or more categories) an normally distributed interval DV
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ordinal or interval	Kruskal Wallis test is non-parametric version of ANOVA and a generalized form of the Mann-Whitney test since it permits two or more groups
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categorical	Chi-square test
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1 DV & 1IV with 2 (dependent/matched groups)

DV	Test
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interval & normal	Paired t-test
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ordinal or interval	Wilcoxon signed rank sum test used when you have two related observations and want to see if the means on these two normally distributed interval variables differ from one another
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ordinal or interval	Wilcoxon signed rank sum test is non-parametric version of a paired sample t-test
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ordinal or interval	Wilcoxon signed rank sum test used, when you do not wish to assume that the difference between the two variables is the interval and normally distributed
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categorical	McNemar test
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1 DV & 1IV with 2 (dependent/matched groups) (cont)

use if interested in the marginal frequencies of two binary outcomes

1 DV & 1 IV with 2 or m. lev. (dep./matched g.)

DV	Test
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interval & normal	One-Way repeated measures ANOVA
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is the equivalent of paired t-test, but allows for 2 or more levels of the categorial variable

ordinal or interval	Friedman test
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use when you have one within-subjects IV with 2 or more levels and a DV that is not interval or normally distributed

categorial (2 categories)	Repeated measures logistic regression
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use if you have a binary outcome measured repeatedly for each subject and wish to run a logistic regression that accounts for the effects of multiple measures from a single subject

1 DV & 2 or more IVs (indep. groups)

DV	Test
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interval & normal	factorial ANOVA
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use if you have 2 or more categorial IV and a single normally distributed interval DV

1 DV & 2 or more IVs (indep. groups) (cont)

ordinal or interval	Ordered logistic regression
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used, when the DV is ordered, but not continuous

categorial (2 categories)	Factorial logistic regression
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used, when you have 2 or more categorial IV but a dichotomous DV

1 DV & 1 interval IV

DV	Test
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interval & normal	Correlation
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used, when you want to see the relationship between two (or more) normally distributed interval variables

interval & normal	Simple linear regression
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allows us to look at the linear relationship between one normally distributed interval IV and one normally distributed interval DV

ordinal or interval	Non-parametric correlation (Spearman)
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used, when one or both of the variables are not assumed to be normally distributed and interval

the values of the variables are converted in ranks and then correlated

categorial	Simple logistic regression
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assumes that the outcome variable is binary

1 DV & 1 or m. interval IV/ 1 or m. categ. IVs

DV	Test
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interval & normal	Multiple Regression
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similar to simple regression, except that in multiple regression you have more than one IV in the equation

interval & normal	Analysis of Covariance
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like ANOVA, except in addition to the categorial IV you also have continuous IV

categorial	Multiple logistic regression
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like simple regression, except that there are 2 or more IV

IV can be dummy or interval variables, but cannot be categorial variables (if, should be coded into 1 or more dummy variables)

categorial	Discriminant analysis
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used, when you have one or more normally distributed interval IV and a categorial DV

is a multivariate technique that considers the latent dimensions in the IV for predicting group membership in the categorial DV

2+ DV & 1 IV with 2 or more levels (indep. groups)

DV	Test
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interval & normal	One-way MANOVA
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like ANOVA, except that there are 2 or more DV.

there is one categorial IV and two or more DV



2+ DV & 1 IV with 2 or more levels (indep. groups) (cont)

interval & normal Multivariate multiple linear regression

used, when you have two or more DV that are to be predicted from two or more IV

interval & normal Factor analysis

is a form of exploratory multivariate analysis that is used to either reduce the number of variables in a model or to detect relationships amongst variables

all variables need to be interval and assumed to be normally distributed

goal is to try to identify factors which underlie the variables

2 sets of 2+ DV & 0 IV

DV Test
interval & normal Canonical correlation

is a multivariate technique used to examine the relationship between two groups of variables

for each set of variables, it creates latent variables and looks at the relationship among the latent variables

assumes that all variables in the model are interval and normally distributed

