

1 Dependent Variable & 0 IVs (1 Population)

DV	Test
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interval & normal	One-sample t-test
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tests if a sample mean differs sig. from a hypothesized value

ordinal or interval	One-sample median test
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tests if a sample median differs sig. from a hypothesized value

categorical (2 categories)	Binominal Test
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tests if the proportion of successes on a two-level categorical dependent variable differs sig. from a hypothesized value

categorical	Chi-square goodness-of-fit
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tests if the observed proportions for a categorical variable differ from hypothesized proportions

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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compares the means of a normally distributed interval DV for two independent groups

ordinal or interval	Wilcoxon-Mann Whitney test
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is a non-parametric analog to the independent samples t-test

used, when you do not assume that the DV is a normally distributed interval variable

1 DV & 1IV with 2 levels (independent groups) (cont)

categorical	Chi-square test
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to see if there is a relationship between 2 categorical variables

assumes that each cell has an expected frequency of 5 or more

categorical	Fischer's exact test
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same as Chi-square test, but can be used regardless of the expected frequency (expected frequency of 5 or less)

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

DV	Test
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interval & normal	One-Way ANOVA
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test for differences in the means of the DV broken down by the levels of the IV

used when categorical IV (with one or more categories) an normally distributed interval DV

ordinal or interval	Kruskal Wallis test
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is non-parametric version of ANOVA and a generalized form of the Mann-Whitney test since it permits two or more groups

categorical	Chi-square test
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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
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test for differences in the means of the DV broken down by the levels of the IV

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

used when categorical IV (with one or more categories) an normally distributed interval DV

ordinal or interval	Kruskal Wallis test
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is non-parametric version of ANOVA and a generalized form of the Mann-Whitney test since it permits two or more groups

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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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

ordinal or interval	Wilcoxon signed rank sum test
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is non-parametric version of a paired sample t-test

used, when you do not wish to assume that the difference between the two variables is the interval and normally distributed

categorical	McNemar test
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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
interval & normal	One-Way repeated measures ANOVA
	is the equivalent of paired t-test, but allows for 2 or more levels of the categorial variable
ordinal or interval	Friedman test
	use when you have one within-subjects IV with 2 or more levels and a DV that is not interval or normally distributed
categorical (2 categories)	Repeated measures logistic regression
	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 (indepn. groups)	
DV	Test
interval & normal	factorial ANOVA
	use if you have 2 or more categorial IV and a single normally distributed interval DV
ordinal or interval	Ordered logistic regression
	used, when the DV is ordered, but not continuous
categorical (2 categories)	Factorial logistic regression
	used, when you have 2 or more categorial IV but a dichotomous DV

1 DV & 1 interval IV	
DV	Test
interval & normal	Correlation
	used, when you want to see the relationship between two (or more) normally distributed interval variables
interval & normal	Simple linear regression
	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)
	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
categorical	Simple logistic regression
	assumes that the outcome variable is binary

1 DV & 1 or m. interval IV/ 1 or m. categ. IVs	
DV	Test
interval & normal	Multiple Regression
	similar to simple regression, except that in multiple regression you have more than one IV in the equation
interval & normal	Analysis of Covariance
	like ANOVA, except in addition to the categorial IV you also have continuous IV
categorical	Multiple logistic regression

1 DV & 1 or m. interval IV/ 1 or m. categ. IVs (cont)	
	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)
categorical	Discriminant analysis
	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
interval & normal	One-way MANOVA
	like ANOVA, except that there are 2 or more DV.
	there is one categorial IV and two or more DV
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



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

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
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interval	Canonical correlation
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&

normal	
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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

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