Results

Single Variable

Welcome to Statkat! This tool will help you to find an appropriate statistical method given the measurement level of your data. Make sure you have correctly defined the measurement levels of your variables on the Data tab. You can change the measurement level of a variable via the Setup button on the Data tab, or by double clicking on a column header of interest. To get started, drop a variable in the white box below Variable. Our tool will then come up with a statistical method that may be appropriate for your data! Note: Our advice is based on the measurement level of your data. There can be details related to your data, task, or assignment that may render the advice moot. Always check the assumptions made by the statistical method before interpreting the results. We always try to come up with the least complicated method that might be applicable given your data. Keep in mind that there may be other, more advanced, methods that might be applicable as well.

Scatter Plot

Relationships, Prediction, and Group Comparisons

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- the relationship between two or more variables, or
- predicting one variable from other variables, or
- the difference between independent (unrelated) groups on a certain variable.

To get started, drop a variable in the box below Variable 1 / Dependent Variable, and one or more variables in the box below Variable 2 / Independent Variables. Our tool will then come up with a statistical method that may be appropriate for your data! In addition, you can drop one or more variables in the box below Control Variables. Control variables are variables that you are not particularly interested in, but which may be related to the dependent variable and possibly also to the independent variables. In experiments (with random assignment), control variables are often included to increase power. In observational studies, control variables are often included mainly to equate subjects on the control variables. This prevents the control variables from confounding the relationships between the independent variables and the dependent variable. If your research question does not make a clear distinction between an independent variable and a dependent variable, the decision of which variable to define as Variable 1/Dependent Variable and which as Variable 2/Independent Variables can be arbitrary. But doesn't this decision affect the recommended method? Well, in some cases it does affect the primary method recommendation, but if a simpler method can be performed by flipping the two variables, this is usually mentioned. It is then up to you which of the recommended methods you prefer. It is important to keep in mind here that none of the correlational statistical techniques can say anything about causality anyway (not even a method like regression analysis), so even if you do make a distinction between an independent and dependent variable, the statistical method will only say something about association, not causation. Note: Our advice is based on the measurement level of your data and on the number of variables entered. There can be details related to your data, task, or assignment that may render the advice moot. Always check the assumptions made by the statistical method before interpreting the results. We always try to come up with the least complicated method that might be applicable given your data. Keep in mind that there may be other, more advanced, methods that might be applicable as well.

Repeated Measurements

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Scatter Plot

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Scatter Plot

Relationships, Prediction, and Group Comparisons

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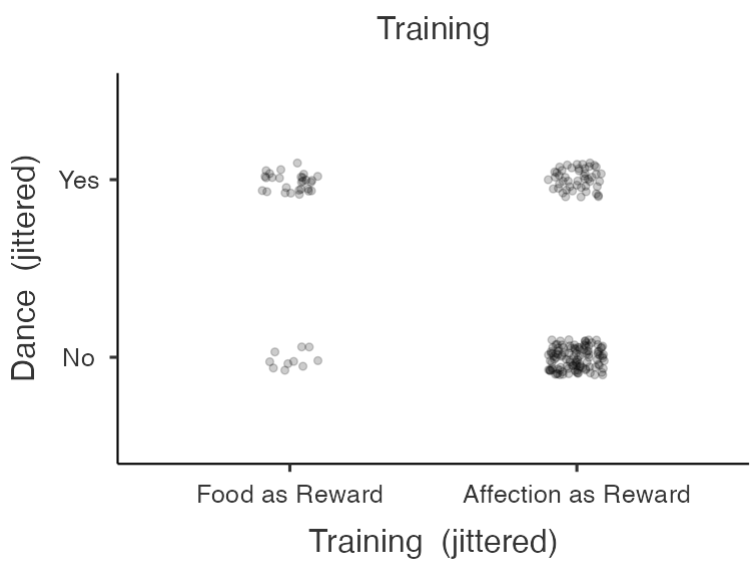
Relationships, Prediction, and Group Comparisons

You have entered a dichotomous variable for Variable 1 / Dependent Variable and a dichotomous variable for Variable 2 / Independent Variables. Hence, the chi-squared test of association seems to be a good option for you! In order to run this test in jamovi, go to: Frequencies > Independent Samples - χ^2 test of association

- Put one of your two categorical variables in the box below Rows, and the other categorical variable in the box below Columns

Click on the link to learn more about this test! Note: since your categorical variables each consist of only two groups, the p value resulting from the chi-squared test is equivalent to the (two sided) p value that would have resulted form the z test for the difference between two proportions.

Scatter Plots of Bivariate Relationships - Dependent/Independent Variables



Contingency Tables

Contingency Tables

Training	Dance		Total
	No	Yes	
Food as Reward	10	28	38
Affection as Reward	114	48	162
Total	124	76	200

χ^2 Tests

	Value	df	p
χ^2	25.4	1	<.001
N	200		

Proportion Test (N Outcomes)

Proportions - Training

Level		Count	Proportion
Food as Reward	Observed	38	0.190
	Expected	100	0.500
Affection as Reward	Observed	162	0.810
	Expected	100	0.500

χ^2 Goodness of Fit

χ^2	df	p
76.9	1	<.001

Contingency Tables

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Training		Dance		Total
		No	Yes	
Food as Reward	Observed	10	28	38
	Expected	23.6	14.4	38.0
Affection as Reward	Observed	114	48	162
	Expected	100.4	61.6	162.0
Total	Observed	124	76	200
	Expected	124.0	76.0	200.0

χ^2 Tests

	Value	df	p
χ^2	25.4	1	<.001
N	200		

Nominal

	Value
Phi-coefficient	0.356
Cramer's V	0.356

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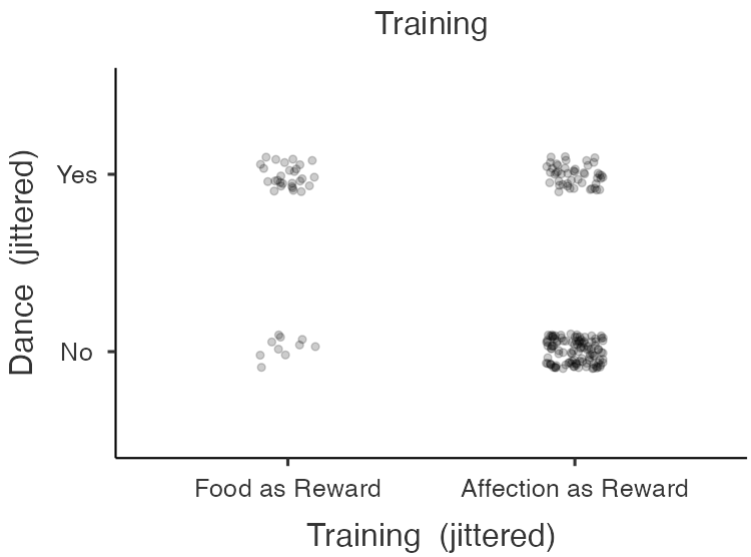

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[1] The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from https://www.jamovi.org.

[2] R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2022-01-01).