

Tutorial 13: Frequencies and Descriptives

Description

This tutorial will describe how you can obtain frequency tables for nominal and ordinal variables. It will also describe how to obtain descriptive tables for ordinal and continuous variables.

Note. An advantage of jamovi is that it produces tables in APA format which is the format we use in psychology for reporting statistical results. You can now right click on any table or graph from the output window on the right and copy and paste them into a document. (Copying and pasting can only work if the 'Syntax mode' is unselected from the top right corner).

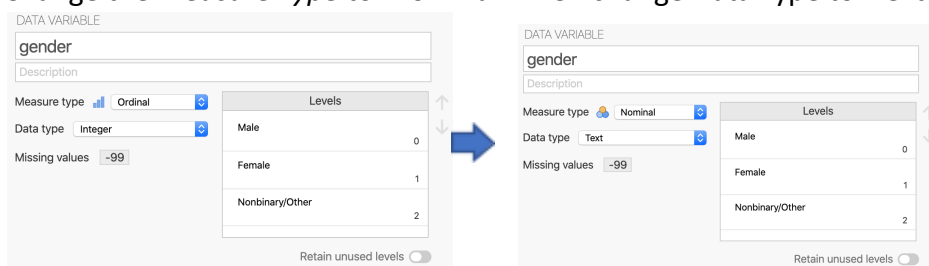
Content

1. Variable adjustments
2. Descriptives and Frequency Tables

Variable Adjustment

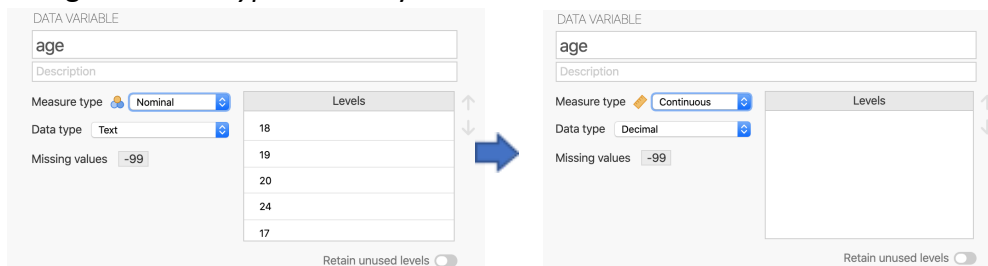
Before beginning this tutorial we would like to adjust the measure type of the variables 'gender' and 'age'. When these variables were imported from an SPSS .sav file the *gender* variable was imported as an 'ordinal' and 'integer' variable, while the *age* variable was imported as 'nominal' and 'text' variable. Since *gender* is a categorical variable in this study we must change from 'ordinal' to 'nominal'. Since *age* is a ratio scale of measurement, we must change it to 'continuous' and decimal. (**Note.** We will also be examining the variable '*activist*' which is an ordinal-integer scale of measurement) Here are the steps to do this:

1. Click on the 'Data' tab in the top left corner of the screen.
2. Select the '*gender*' variable by double clicking on the column header with the *gender* variable.
3. Change the *Measure Type* to 'Nominal'. Then change Data Type to 'Text'.



4. Now, select the '*age*' variable by double clicking on the column header with the *age* variable.

- Change the *Measure Type* to 'Continuous'. This will automatically change the *Data Type* to 'Decimal' but check that this happens, if it does not do this you must change the *Data Type* manually to 'Decimal'.

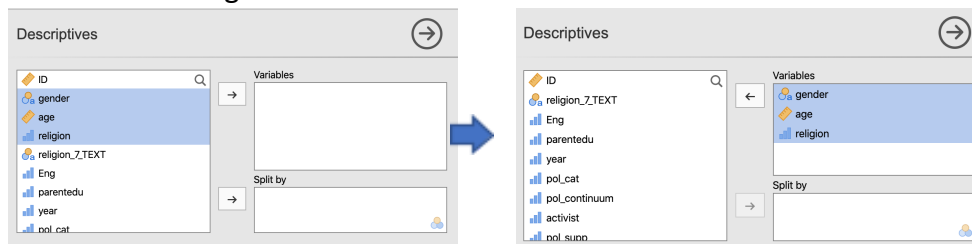


Frequency Tables and Descriptives

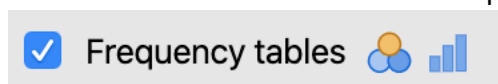
In Jamovi frequency tables can be created for nominal and ordinal data but not for continuous data. Descriptive tables can be created for ordinal and continuous variables and include a selection of the following descriptive values.



Sample Size	Central Tendency
<input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> Missing	<input checked="" type="checkbox"/> Mean
Percentile Values	<input checked="" type="checkbox"/> Median
<input type="checkbox"/> Cut points for 4 equal groups	<input type="checkbox"/> Mode
<input type="checkbox"/> Percentiles 25,50,75	<input type="checkbox"/> Sum
Dispersion	Distribution
<input checked="" type="checkbox"/> Std. deviation <input checked="" type="checkbox"/> Minimum	<input type="checkbox"/> Skewness
<input type="checkbox"/> Variance <input checked="" type="checkbox"/> Maximum	<input type="checkbox"/> Kurtosis
<input type="checkbox"/> Range <input type="checkbox"/> S. E. Mean	Normality
<input type="checkbox"/> IQR	<input type="checkbox"/> Shapiro-Wilk

- To obtain frequency tables and descriptives select the 'Analyses' tab in the top left corner. Under this tab also in the top left corner click on "Explore" and select 'Descriptives'.
- Move the following variables (*gender, age, activist*) to the variable window by selecting the variables in the window on the left and clicking the arrow for the window on the right labeled "Variables"

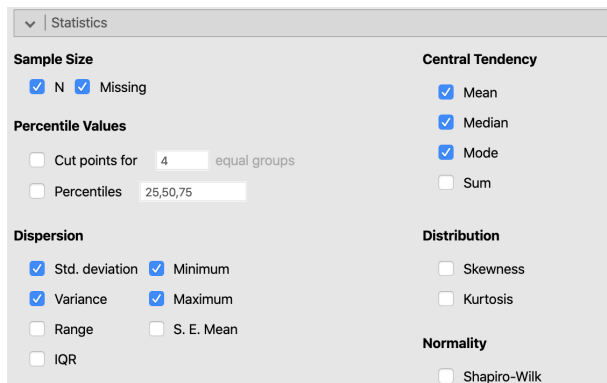


- Below the list of variables select 'Frequency Tables':



Note the symbols for nominal  and ordinal data , this means frequency tables can be created for variables that are these types of scales of measurement.

2. Below the 'Frequency Tables' selection click on the 'Statistics' tab and check that mean, median, mode, standard deviation, variance, minimum, and maximum are all selected.



Statistics

Sample Size

N Missing

Central Tendency

Mean

Median

Mode

Sum

Percentile Values

Cut points for 4 equal groups

Percentiles 25,50,75

Dispersion

Std. deviation Minimum

Variance Maximum

Range S. E. Mean

IQR

Distribution

Skewness

Kurtosis

Normality

Shapiro-Wilk

3. The output can be found in the pane on the right-hand side. Two tables were created:
 - a. Descriptive table – was only created for *age* and *activist*, because they represent continuous and ordinal variables respectively,

Descriptives

Descriptives			
	gender	age	activist
N	119	119	119
Missing	0	0	0
Mean		19.9	4.99
Median		19.0	5
Mode		18.0	5.00
Standard deviation		2.10	1.41
Variance		4.39	1.99
Minimum		17.0	1
Maximum		28.0	7

Note. No descriptives for *gender* were created because it is a nominal variable. There were 0 missing values out of a total of 119 data points for all the variables. The mean for age $M_{age} = 19.9$, with standard deviation $s = 2.10$ and variance $s^2 = 4.39$, the range = 17-28 years (look at the minimum and maximum for the range). The mean for age is greater than the median which is greater than the mode, and this suggests that the shape of the distribution is positively skewed. The mean for activist $M_{activist} = 4.99$, with standard deviation $s = 1.41$ and variance $s^2 = 1.99$, the range = 1-7.

- b. Frequency tables – two frequency tables were created one for the *gender* variable and one for *activism* variable

Frequencies

Frequencies of gender

Levels	Counts	% of Total	Cumulative %
Male	25	21.0%	21.0%
Female	89	74.8%	95.8%
Nonbinary/Other	5	4.2%	100.0%

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Frequencies of activist

Levels	Counts	% of Total	Cumulative %
Strongly disagree	1	0.8%	0.8%
Disagree	7	5.9%	6.7%
Somewhat disagree	10	8.4%	15.1%
Neither agree nor disagree	20	16.8%	31.9%
Somewhat agree	33	27.7%	59.7%
Agree	32	26.9%	86.6%
Strongly agree	16	13.4%	100.0%

Frequency tables can also give you information about modes for nominal and ordinal variables, proportions, and cumulative percentages that can be used to extract information about percentiles and percentile ranks. For example, the mode for *gender* is female and the mode for *activist* is “somewhat agree”. The percentile rank for “somewhat disagree” is 15.1%. The 6.7th percentile for *activist* is “Disagree”.

-----END TUTORIAL-----

This Jamovi tutorial is a companion to a video tutorial and these materials were developed by:

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