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Tutorial 7: Creating Composite Scores

Description

In this tutorial we will learn how to create variables that are composite scores. The goal of using several items to measure a construct is to produce a single composite score that is more reliable than any single item in your measure. In the current example, we will use the Moral Foundations Questionnaire (Graham, et al., 2011). This questionnaire has 30 questions that can be used to measure five foundations of morality underlie people's moral judgments (i.e., harm/care; fairness; loyalty; respect; and purity). Typically, researchers do this by computing the **mean** of the items. To get people's moral score on each foundation, there are 6 items from the questionnaire that can be averaged to create a single composite.

Note: we are using the datafile ARMF2020_wave1andwave2.omv

We will compute people's scores for the **purity foundation**. Here are the items:

Purity:
MFQ 5 DECENCY - Whether or not someone violated standards of purity and decency
MFQ 11 DISGUSTING - Whether or not someone did something disgusting
MFQ 16 GOD - Whether or not someone acted in a way that God would approve of
MFQ 21 HARMLESSDG - People should not do things that are disgusting, even if no one is harmed.
MFQ 27 UNNATURAL - I would call some acts wrong on the grounds that they are unnatural.
MFQ 32 CHASTITY - Chastity is an important and valuable virtue.

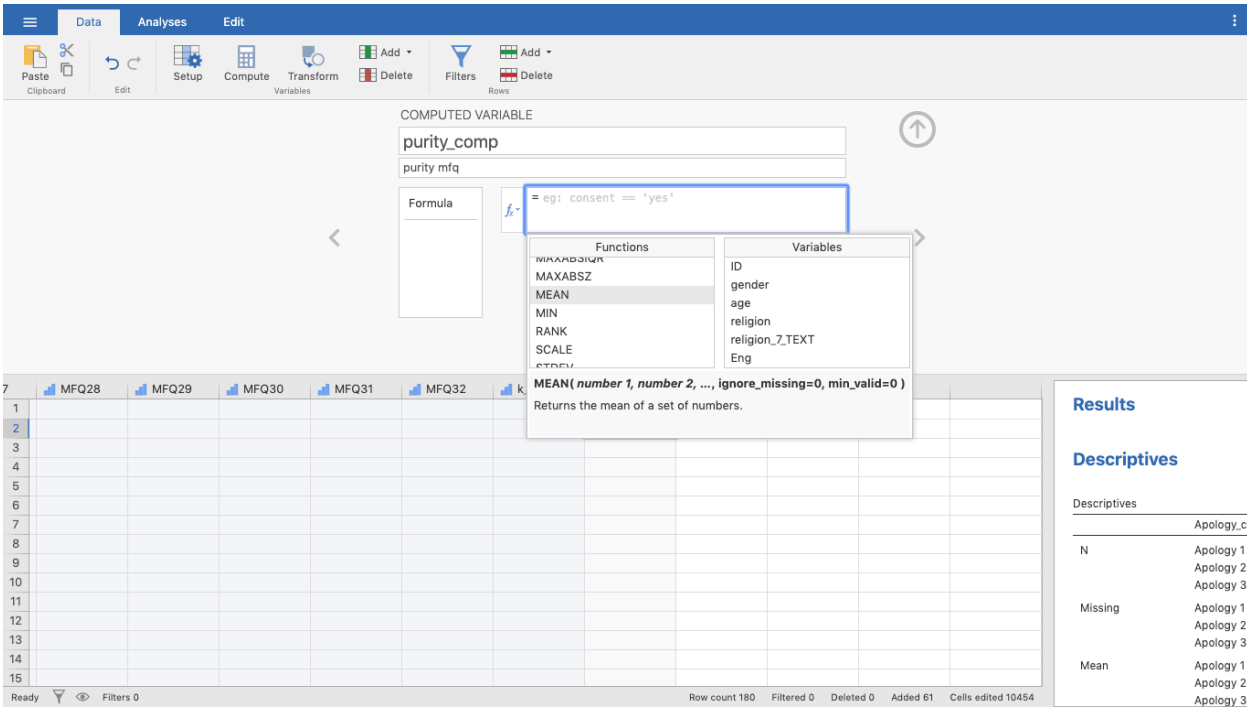
Content

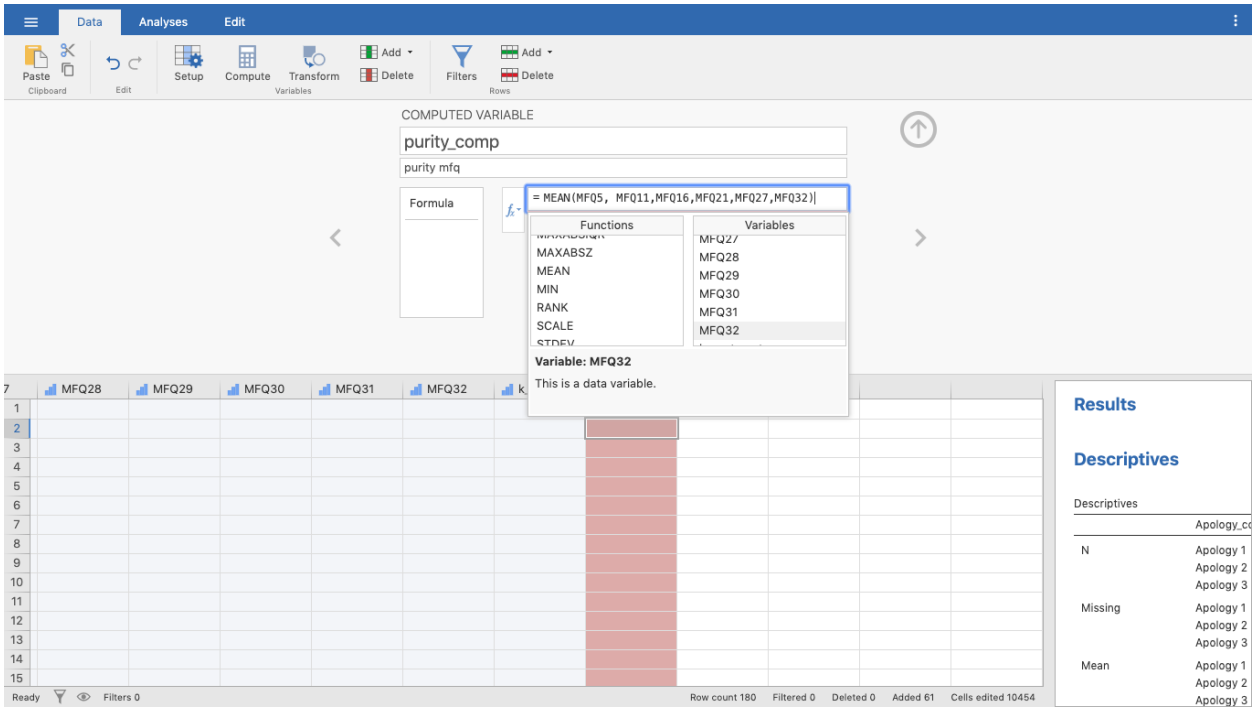
1. **Create the composite score**
2. **Verify the new score**
3. **Reporting creation of a composite score**

STEPS

1. **Create the composite score**
    a. Scroll to the end of the variables and click in the top box and select "New Computed Variable".

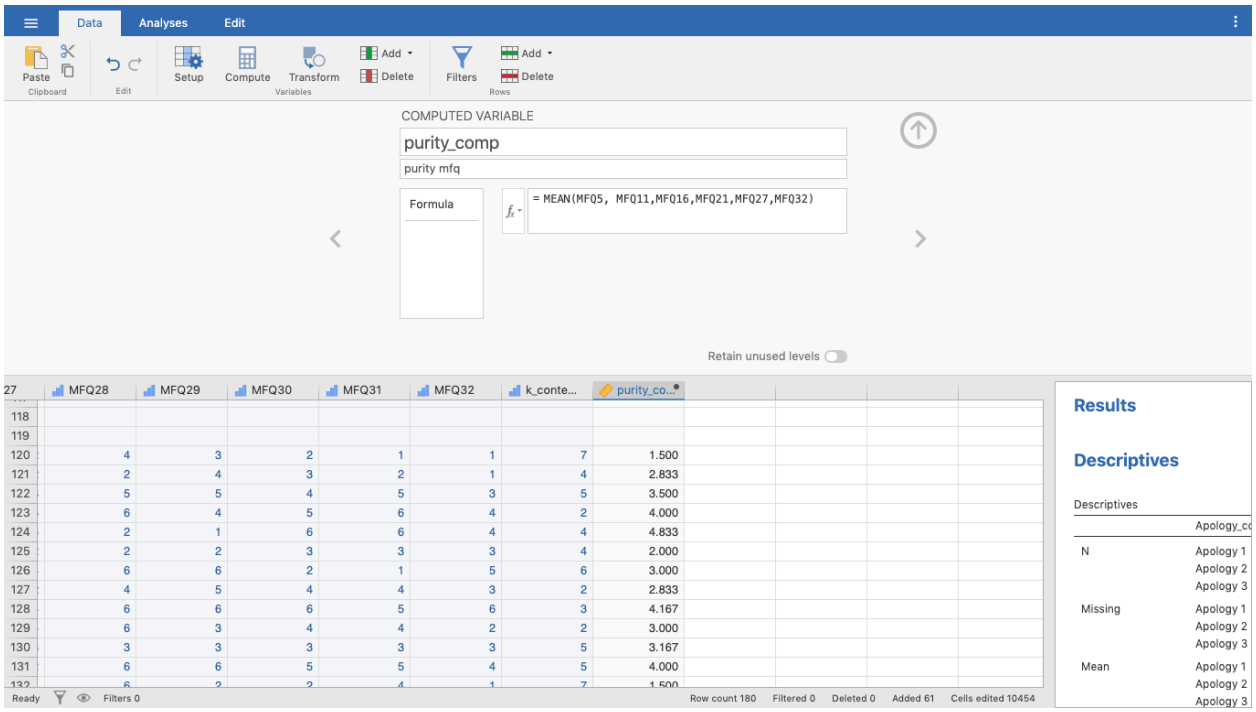
b. Give the new composite variable a name, we use "Purity_comp." In the formula box, select MEAN and double click it and it will be placed in the formula window. Then in the variable window, scroll down and find your specific variables and inside the parentheses, double click and add a comma after each variable you want in the composite and close the parentheses.





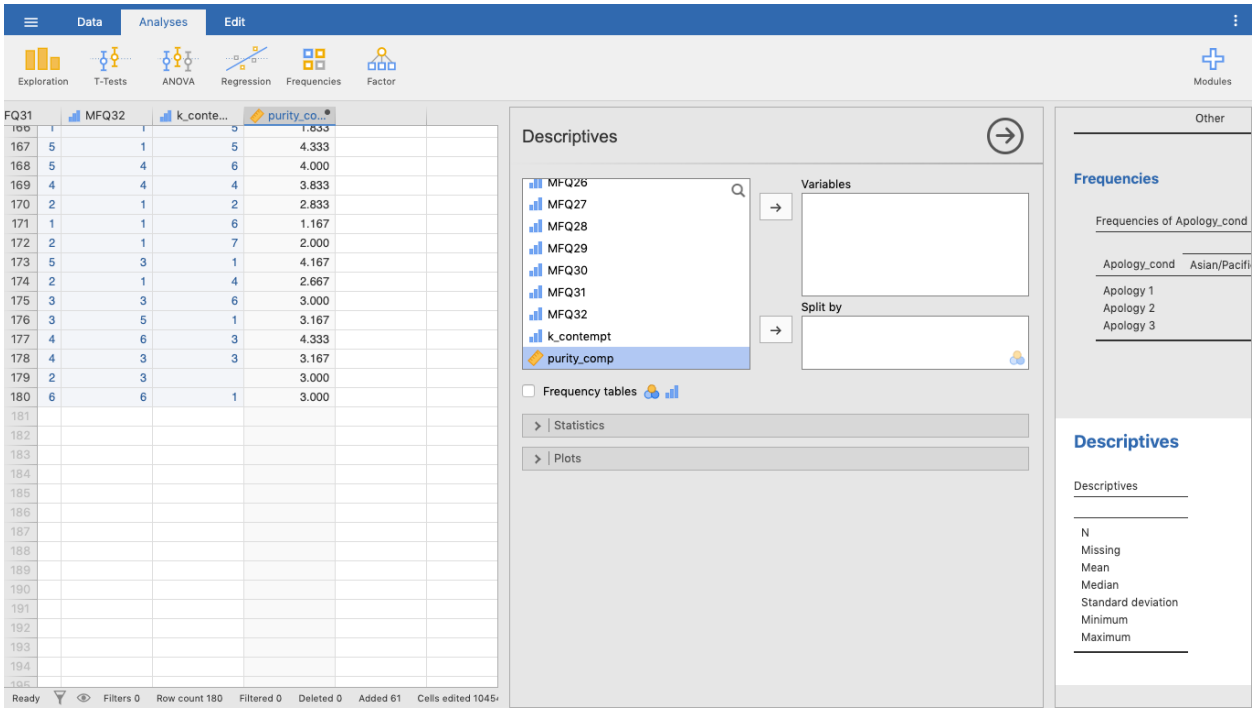
c. That new 'Purity_comp' variable is the composite score. It is a single variable that will take the place of the 6 individual purity items and is more reliable (has less error) than any of the original items.

*__Note.__that in this dataset, only wave 2 completed the MFQ so you will see scores only starting with case 120



2. Verify the new score

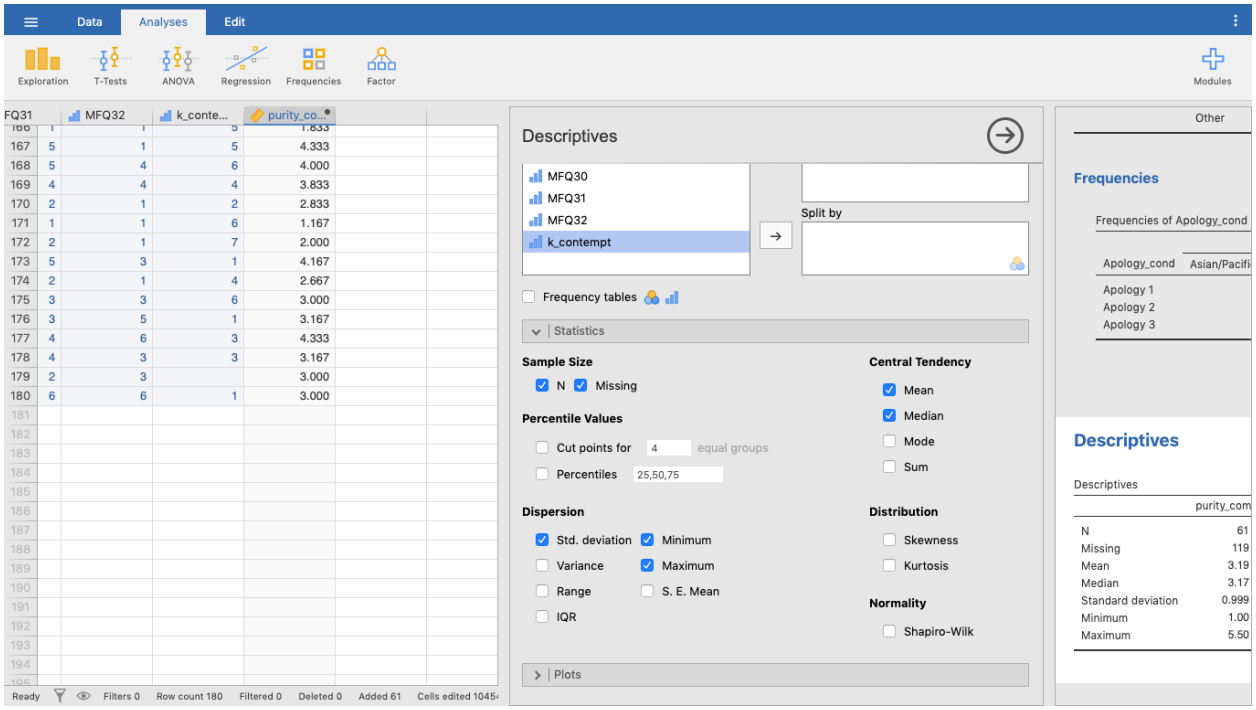
a. Examine the descriptives statistics of the new variable. Click on the *Analyses* tab at the top and then *Descriptives* at the left end.



b. Put "Purity" into the "Variables" list and press "Enter".

c. Then click on Statistic below the item list to expand the descriptives you can examine.

d. You should at least check "Standard Deviation" and "Variance" under *Dispersion* and any other statistics you would like to example. You should get this:



Descriptives

Descriptives

	purity_comp
N	61
Missing	119
Mean	3.19
Median	3.17
Standard deviation	0.999
Minimum	1.00
Maximum	5.50

3. **Reporting creation of a composite score**
    a. Your report of a new score should include:
        i. How many items went into the new score (6 in this case).
        ii. How the item values were combined (mean, sum, etc.).
        iii. The Cronbach's alpha reliability. (see tutorial # 8)
        iv. The minimum, maximum, mean, and standard deviation of the scores.

For example:

A Purity Foundation score was computed for each participant by taking the mean of the 6 items of the Moral Foundations Questionnaire (MFQ). The Cronbach's alpha reliability of the Purity foundation was XX. Purity scores ranged from XX to XX, with a mean of XX and standard deviation of XX. High scores on the Purity foundation indicate that a person believes that some behaviors are immoral because they invoke disgust and represent spiritual or sacred violations.

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

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

Aline Hitti, Ph.D., University of San Francisco
Saera Khan, Ph.D., University of San Francisco
Sage Stefanick, University of San Francisco
Erica Divinagracia, University of San Francisco
Adolfo Barrales, University of San Francisco

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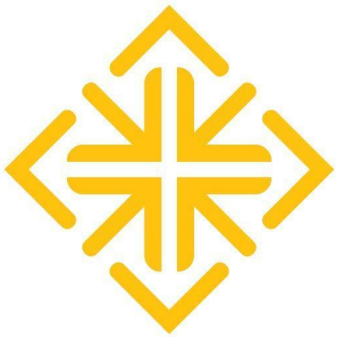

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