Tutorial 6: Recoding Variables

Description
In this tutorial we will go over how to recode variables. Sometimes we ask questions in which the response value is in the opposite direction of what we are measuring. For example, if we are measuring self-esteem with the questions “I feel like I am a worthwhile person”, “I think I am well-liked by others,” and “I don’t feel good about myself,”- that last question needs to be reverse coded so that its direction is consistent with the others and higher numbers mean higher self-esteem. Clearly a person responding 6 (strongly agree) to this last question shouldn’t be considered as having high self-esteem, and so 6 should be treated as 1, 5 as 2, 1 as 6, etc. To reverse code these items, we can just use the following simple transform:

Opening your own datafile
1. Open Jamovi and you should be able to see an empty spreadsheet (if you do not see the spreadsheet go to the hamburger icon and select “Open”).

   ![Image of Jamovi interface]

2. The questions in this file are mainly concerned with participants’ reactions towards Kathy. Here are the questions along with their variable name in parentheses.

Now we are interested in the extent to which the following statements describe your reactions and opinions regarding Kathy’s behavior

Use the scale 1 (Strongly Disagree) to 7 (Strongly Agree) to answer the following questions
(k_anger) I feel angry at Kathy
(k_disgust) I feel disgusted by Kathy's actions
(k_bad) I feel bad for Kathy for receiving these online responses
(k_sorry) I feel sorry for Kathy for receiving these online responses
(k_relate) I can relate to why Kathy behaved the way she did in this situation
(k_accept) I think Kathy's behavior was acceptable in this situation
(k_thought) I think Kathy did not put much thought before into saying what she said
(k_funny) I think Kathy was just trying to be funny
(k_feltbad) I think that Kathy felt bad about her actions
(k_hurt) I think that Kathy intended to hurt people with what she said
(k_repeat) I think that Kathy will repeat her actions in the future
(k_sincere) I think Kathy's apology was sincere
(k_fakeapologize) I think that Kathy only apologized to protect her self-image

Reviewing these questions, you can see that the rating scale can imply higher numbers mean more negative or positive reactions towards Kathy because of the way the questions are sometimes worded. The ones highlighted in blue show that these questions in their original wording imply higher numbers mean more favorable views towards Kathy. Recoding these so that the scale is reversed and higher numbers on any of these items would make all these questions tap into people’s negative reactions towards Kathy. We are going to use the transform command to recode these responses so that the scale is reverse coded.

Recoding Using the ‘Transform’ Function
Step I: Click on the variable that you want to recode. In this case, we are recoding: “I feel sorry for Kathy for receiving these online responses” (k_sorry).

Step II: Click: Data → Transform
Once you click on transform, Jamovi will insert a new variable into your spreadsheet so the original variable is preserved. Notice that the recoded variable has a red dot here. Now we are going to create a new reverse code script for Jamovi so that you can change this variable and any other variable that you want to reverse code as well.

Step III: Create the transformation in 4 steps.

Create new transformation

After clicking Create new transform... the transform editor slides into view:

Let’s go through the steps 1-4 in detail here: (Steps 5 and 6 in Notes).
1. Change Transform 1 to what you want the new variable to be called.
2. Describe what the recoding you will do to this variable so you can remind yourself what you did.
3. If you want to change the ending of the variable name, it will remind you that you used this particular reverse code script to recode this variable - you can do that here.

Steps 1-3 completed below:

The function window is where you create the code. You can use the special $\text{source}$ keyword. In this case, with the 7 point scale, if you subtract 8 from the scale value which you designate the special keyword for, it will reverse score the scale. For example, if someone gave the rating 1 then 8-1 = 7; 8-2 = 6; all the way to if someone gave a 7 then 8-7 = 1.
Once the reverse code script is inputted, Jamovi will automatically fill in the numbers into the data column for the recoded variable. You can see the numbers below. Keep in mind that we added scale values and labels to the original variable but those values correspond to the numbers so that Strongly Disagree is a 1 for K_sorry and next to it is the K_sorry_rec has a 7 so the reverse score was done correctly.

Reverse coding additional variables

Now that you created that reverse score script, you can easily recode the variables you want to reverse score.

Step 1:
Select the next variable you want to recode. Here we chose (k_relate) I can relate to why Kathy behaved the way she did in this situation. Once we clicked on this variable and hit transform, a new column was created.
Step 2:
Now under ‘using transform’, there is a new script option you created called ‘Reverse Code’

Once you select that script, the reverse coding will be used in the new variable ‘k_relate_rec’ column

Note:
5. This number is a running tally for how many variables in your data set used this script
6. Auto is where you can change the type of data if you wanted. This is not relevant to reverse coding but if you wanted to change a continuous variable to categorical one, you would do it here.

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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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