PSY 3307

SPSS Tutorial

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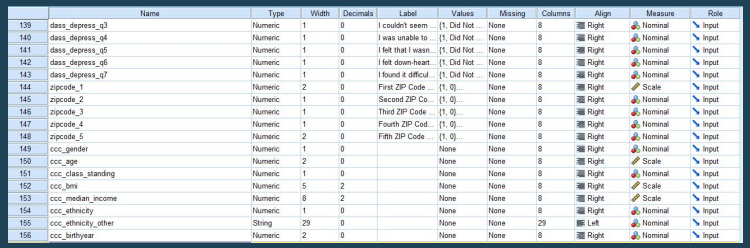
Things We'll Learn With SPSS

- Changing scale of variables
- Recoding variables
  - reverse scoring variables
- dummy coding variables
- run descriptives
- run frequencies
- standardize variables (z-transform variables)
- Create bar graphs/histograms of variables
- Creating composite scores

Changing Scale of Variables

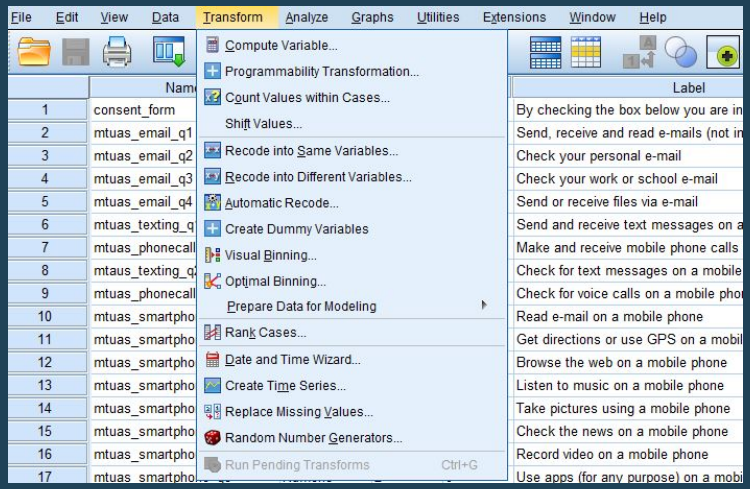
- You'll need to go to the Variable View
- Click on `Measure` and change it to the appropriate measurement scale
- Scale is both ratio and interval scales combined



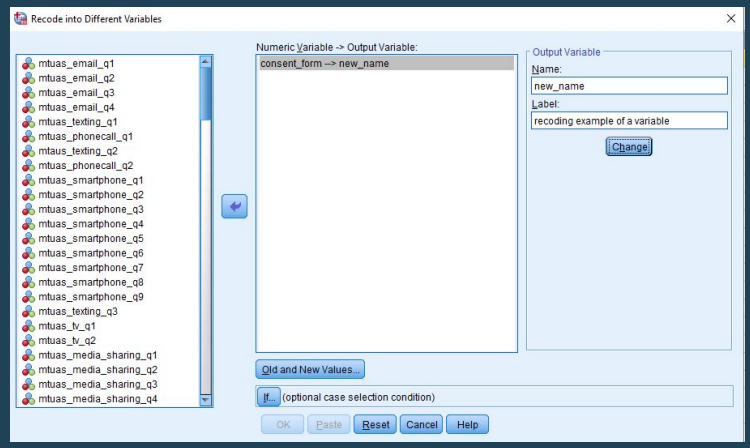
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
139	dass_depress_q3	Numeric	1	0	I couldn't seem ...	{1, Did Not ...	None	8	Right	Nominal	Input
140	dass_depress_q4	Numeric	1	0	I was unable to ...	{1, Did Not ...	None	8	Right	Nominal	Input
141	dass_depress_q5	Numeric	1	0	I felt that I wasn...	{1, Did Not ...	None	8	Right	Nominal	Input
142	dass_depress_q6	Numeric	1	0	I felt down-heart...	{1, Did Not ...	None	8	Right	Nominal	Input
143	dass_depress_q7	Numeric	1	0	I found it difficul...	{1, Did Not ...	None	8	Right	Nominal	Input
144	zipcode_1	Numeric	2	0	First ZIP Code ...	{1, 0}...	None	8	Right	Scale	Input
145	zipcode_2	Numeric	1	0	Second ZIP Co...	{1, 0}...	None	8	Right	Nominal	Input
146	zipcode_3	Numeric	1	0	Third ZIP Code ...	{1, 0}...	None	8	Right	Nominal	Input
147	zipcode_4	Numeric	1	0	Fourth ZIP Cod...	{1, 0}...	None	8	Right	Nominal	Input
148	zipcode_5	Numeric	2	0	Fifth ZIP Code ...	{1, 0}...	None	8	Right	Nominal	Input
149	ccc_gender	Numeric	1	0		None	None	8	Right	Nominal	Input
150	ccc_age	Numeric	2	0		None	None	8	Right	Scale	Input
151	ccc_class_standing	Numeric	1	0		None	None	8	Right	Nominal	Input
152	ccc_bmi	Numeric	5	2		None	None	8	Right	Scale	Input
153	ccc_median_income	Numeric	8	2		None	None	8	Right	Scale	Input
154	ccc_ethnicity	Numeric	1	0		None	None	8	Right	Nominal	Input
155	ccc_ethnicity_other	String	29	0		None	None	29	Left	Nominal	Input
156	ccc_birthyear	Numeric	2	0		None	None	8	Right	Nominal	Input

Recoding Variables

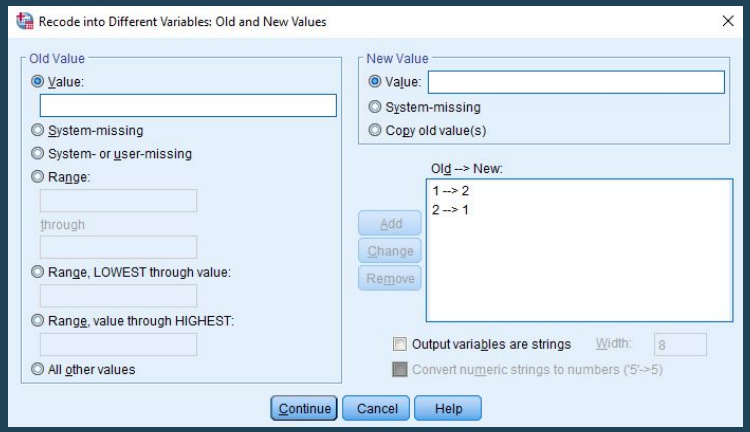
- Go to Transform --> Recode into Different Variables



- Choose the variable you want to change by clicking the blue box to move the variable over
- Give it a new name and a label explaining the changes you are going to make
- Click Change
- Click on `Old and New Values`

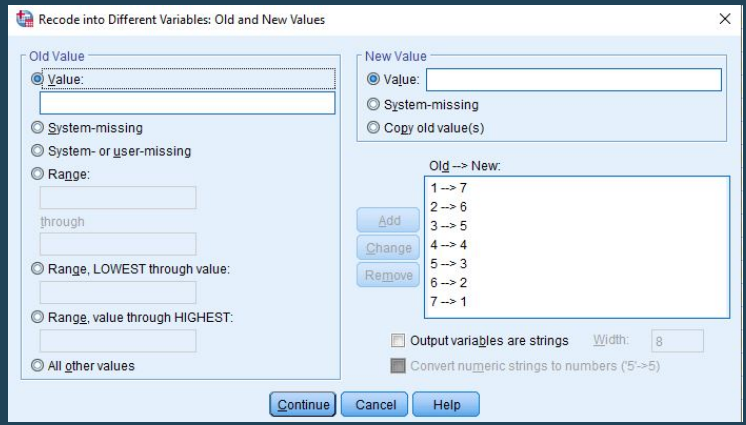


- Choose the old value and provide a new value in the respective areas
- Make sure to click on `Add` below `New Value` so that you will actually make the changes
- Continue
- OK
- Your output window should open up afterward showing the changes you made



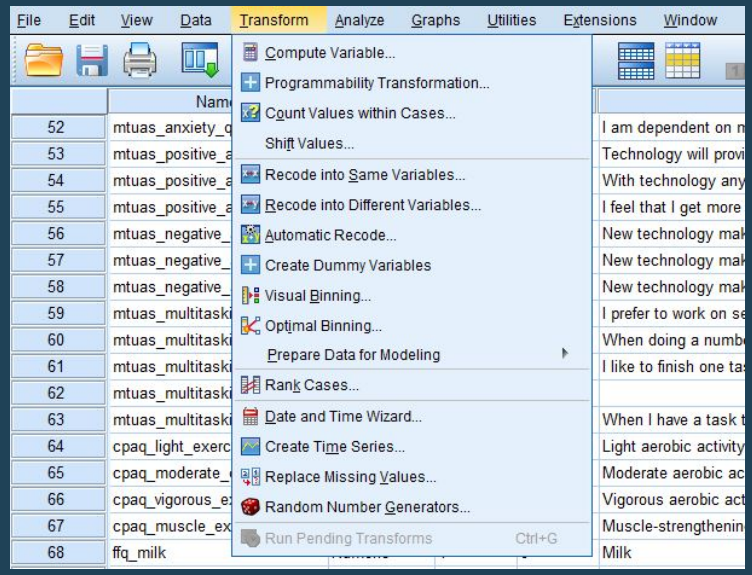
Reverse Scoring Variables

- One example of recoding is to reverse score
- You can check the values of variables in `Variable View` to see if they need reverse scoring
    - You'll most likely get this information from the published article
- Same steps as recoding from previous slides
- The screenshot shows that I am changing the order of the values
- Give it a meaningful name

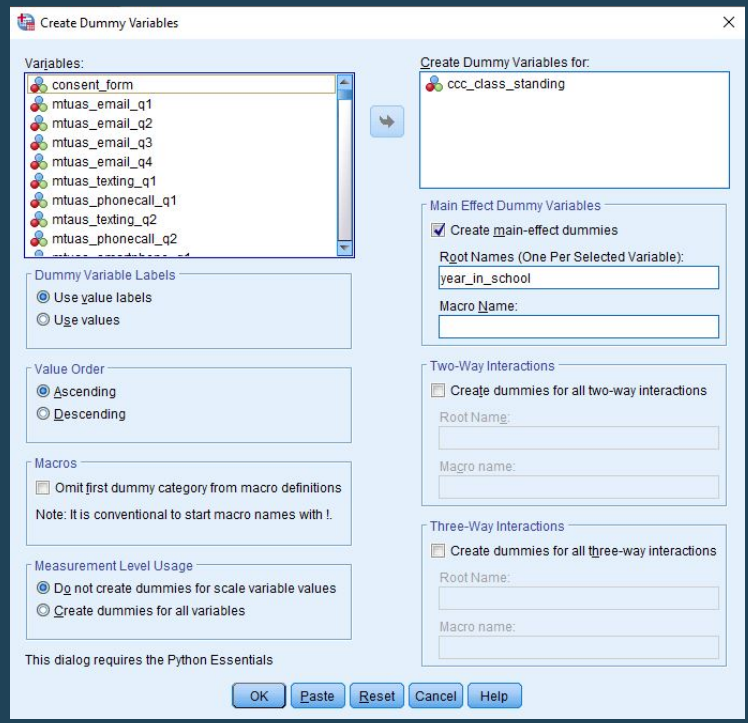


Dummy Coding Variables

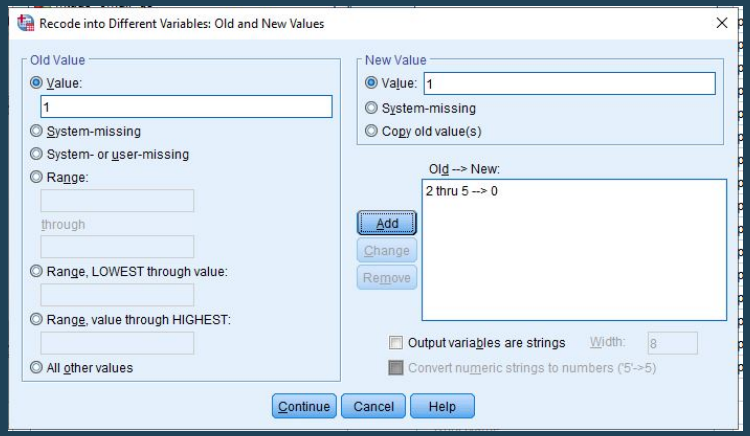
- Useful for analyses where we are comparing multiple groups or are controlling for additional variables
    - ANOVA does not use this, it does what are called post-hoc tests (we'll get there)
    - most useful in multiple regression
- To control/adjust for additional variables = Make sure we are accounting for important variables
- Go to `Create Dummy Variables`
- Only works for nominal and ordinal data (e.g., variables with categories)



- move the variable over that you want dummy variables for
- put a name under `Root Names` so you know you created dummy variables

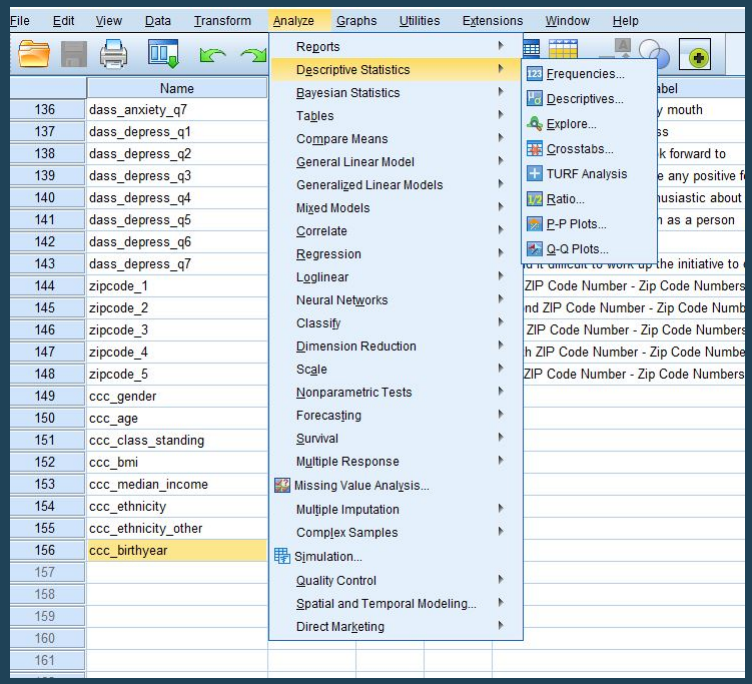


- Additionally, you can use the recoding method and give them each a new name
- Old values would be all the options that you are not interested in
    - Using the class standing variable, I created a variable called freshman
    - Old values are 0 for all the old values that aren't freshmen (#1)
- So everyone is a 0 (e.g., 2 = 0, 3 = 0, 4 = 0, 5 = 0)
    - freshmen are 1 so we would keep it as 1 = 1
- Instead of doing it one-by-one, you can input the range of values
    - 2 through 5 for the old values

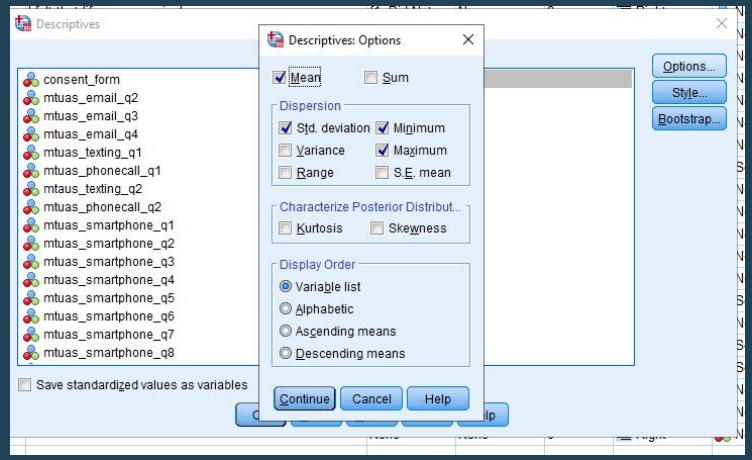


Descriptive Statistics

- Descriptive statistics are Analyze --> Descriptive Statistics --> Descriptives

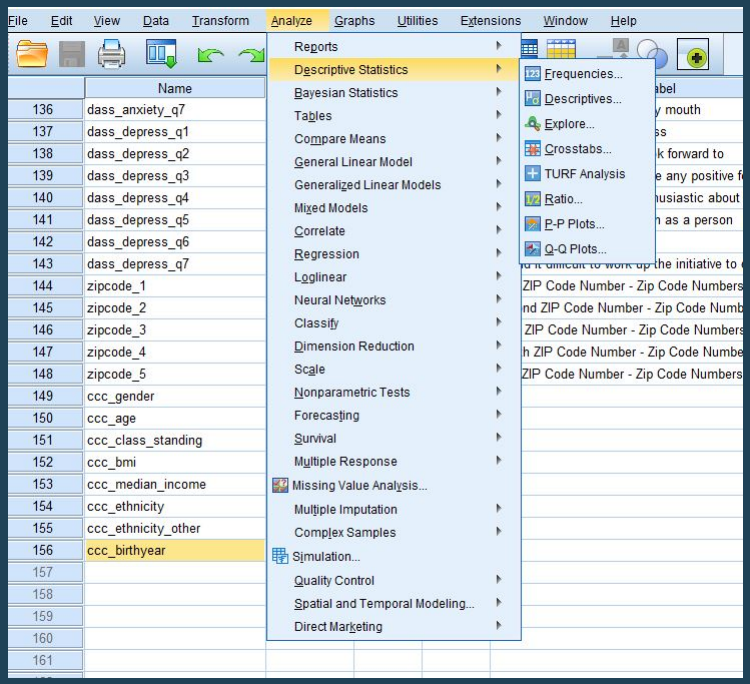


- Move the variables over that you want descriptive statistics of
- Click on `Options` to choose what type of descriptive statistics you want
- Continue
- OK
- It will then show you in the output

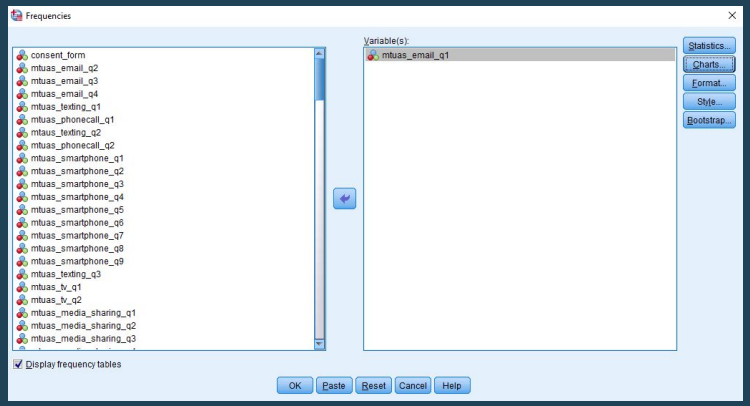


Frequencies

- Frequencies is also under Analyze --> Descriptive Statistics --> Frequencies

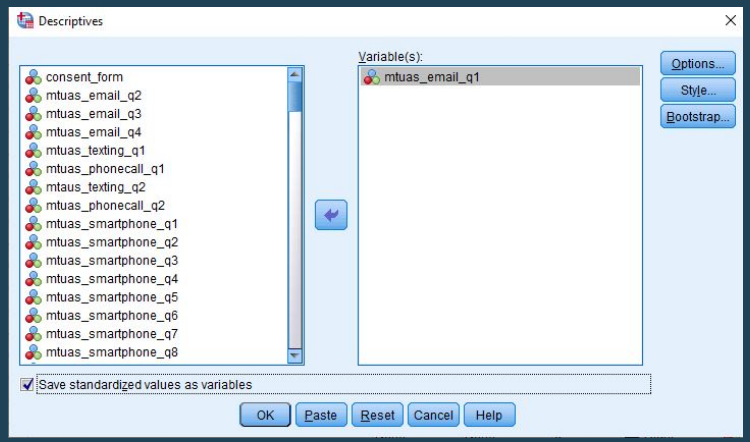


- You will move your variables over
- Statistics gives you descriptive statistics
- At the bottom there is `Display Frequency Tables`
    - Make sure this is checked to get frequency tables
- Charts will give you the option of either choosing bar graphs or histograms
    - This is the fastest way to get plots



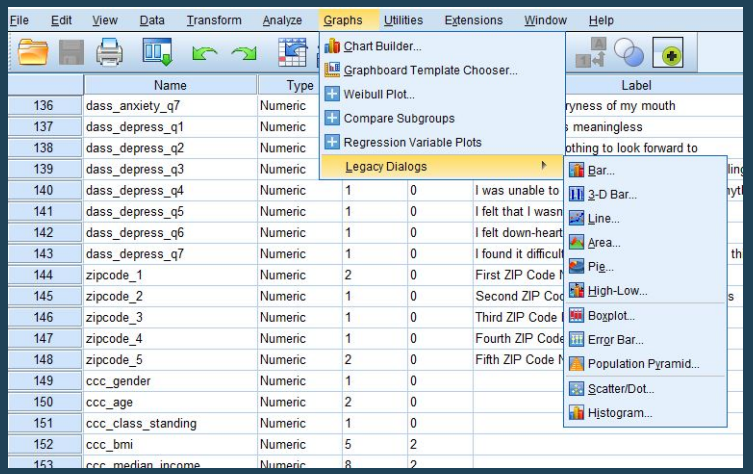
Z-transforming Variables

- Go to descriptives
- Click on the `Save Stnadardized Values as Variables` at the bottom
- OK
- Now you'll have additional variables that are on a z-distribution
    - Run descriptives to see how they differ from the raw values



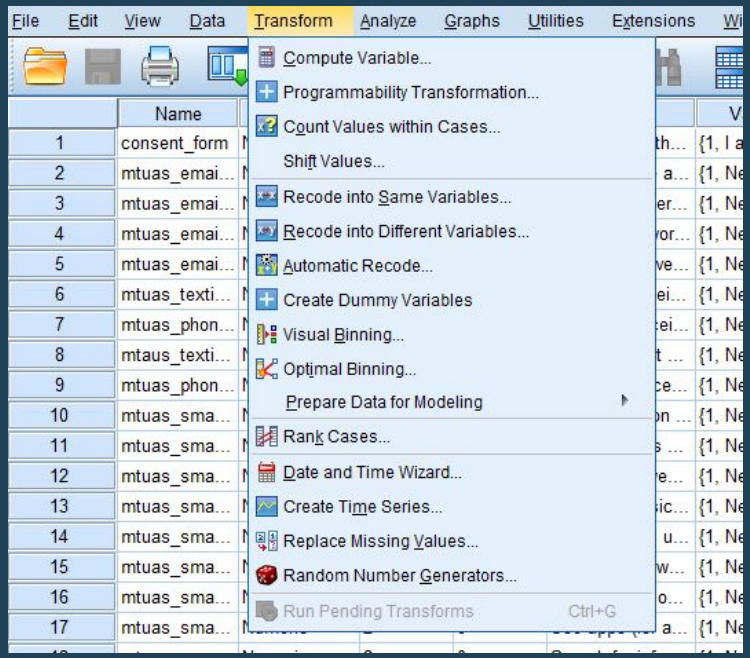
Plots

- You can get basic descriptive plots through frequencies
- For more detailed graphs, Graphs --> Legacy Dialogs --> ...
    - Bar for bar graphs
    - Line for looking at time
    - Boxplot for analyses later on (t.test & ANOVA)
    - Scatterplot for analyses later on (correlation & regression)
    - Histogram for continuous variables to be shown on a histogram



Creating Composite Scores

- Go to Transform --> Compute Variable



- `Target Variable` is the name you want for your new variable
- In `Numeric Expression` you'll use this to create averages or summative scores for composite scores/variables
- The reasoning is rather than test all questions of a certain construct (e.g., depression), you test the average depression score based on all aspects of depression in each question combined
- Add all the variables up together that belong to a specific construct
- OK
- Output will automatically come up with your new calculation and new variable