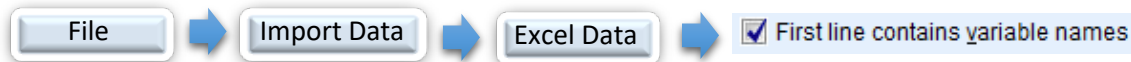Instructions. Download the Young People Survey data and create the needed variables.
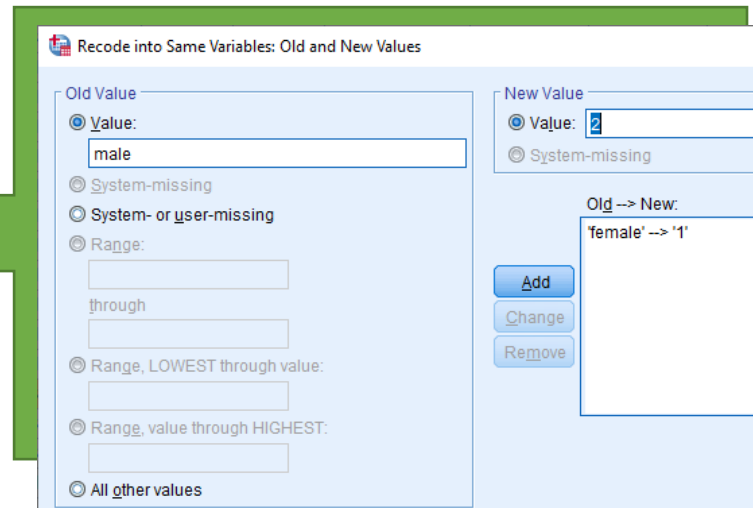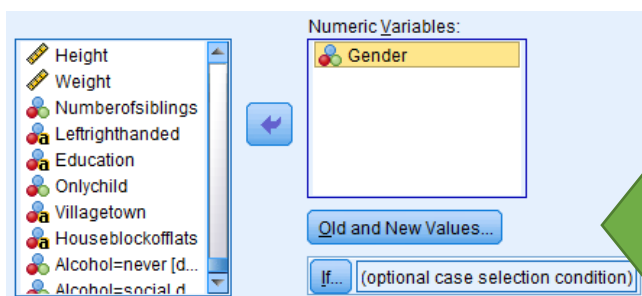
Data: This dataset was collected from 1010 statistics students and their friends at the Comenius University in Bratislava. The survey was administered in Slovak language and later translated into English.

1. Download the dataset from https://github.com/AMDeLouize/Statistics-Workshops. Open a new dataset in SPSS and import the excel data:

File ➡ Import Data ➡ Excel Data ➡ ☑ First line contains variable names

2. Review the questionnaire (also on the course website) and data.

3. Recode gender.

Transform ➡ Recode into same variable

Numeric Variables:
Gender

Height
Weight
Numberofsiblings
Leftrighthanded
Education
Onlychild
Villagetown
Houseblockofflats
Alcohol=never [d...
Alcohol=social d...

Old and New Values...

If... (optional case selection condition)

Recode into Same Variables: Old and New Values

Old Value
- ◉ Value: male
- ◯ System-missing
- ◯ System- or user-missing
- ◯ Range:
  ___ through ___
- ◯ Range, LOWEST through value:
- ◯ Range, value through HIGHEST:
- ◯ All other values

New Value
- ◉ Value: 2
- ◯ System-missing

Old --> New:
'female' --> '1'

Add
Change
Remove

4. Create dummy variable for Alcohol.
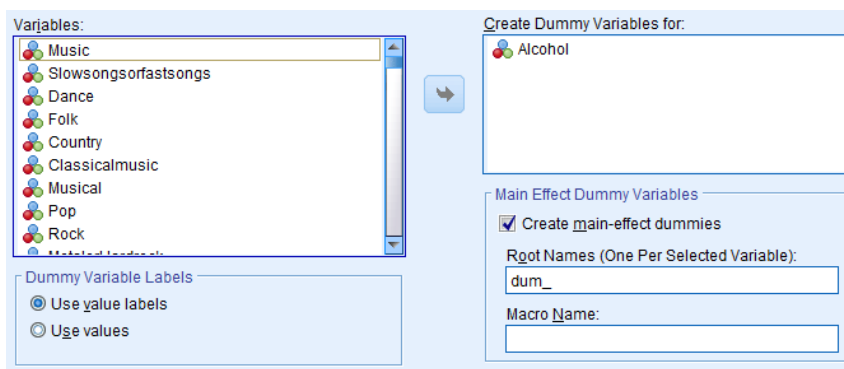
Transform ➡ Create Dummy Variables

Variables:
Music
Slowsongsorfastsongs
Dance
Folk
Country
Classicalmusic
Musical
Pop
Rock

Create Dummy Variables for:
Alcohol

Dummy Variable Labels
- ◉ Use value labels
- ◯ Use values

Main Effect Dummy Variables
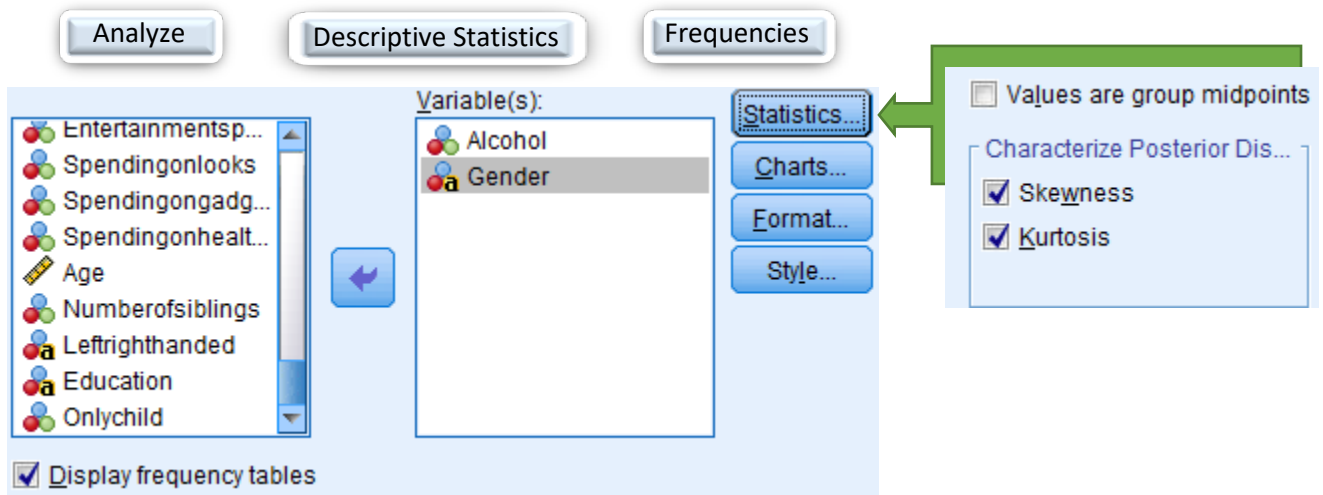- ☑ Create main-effect dummies
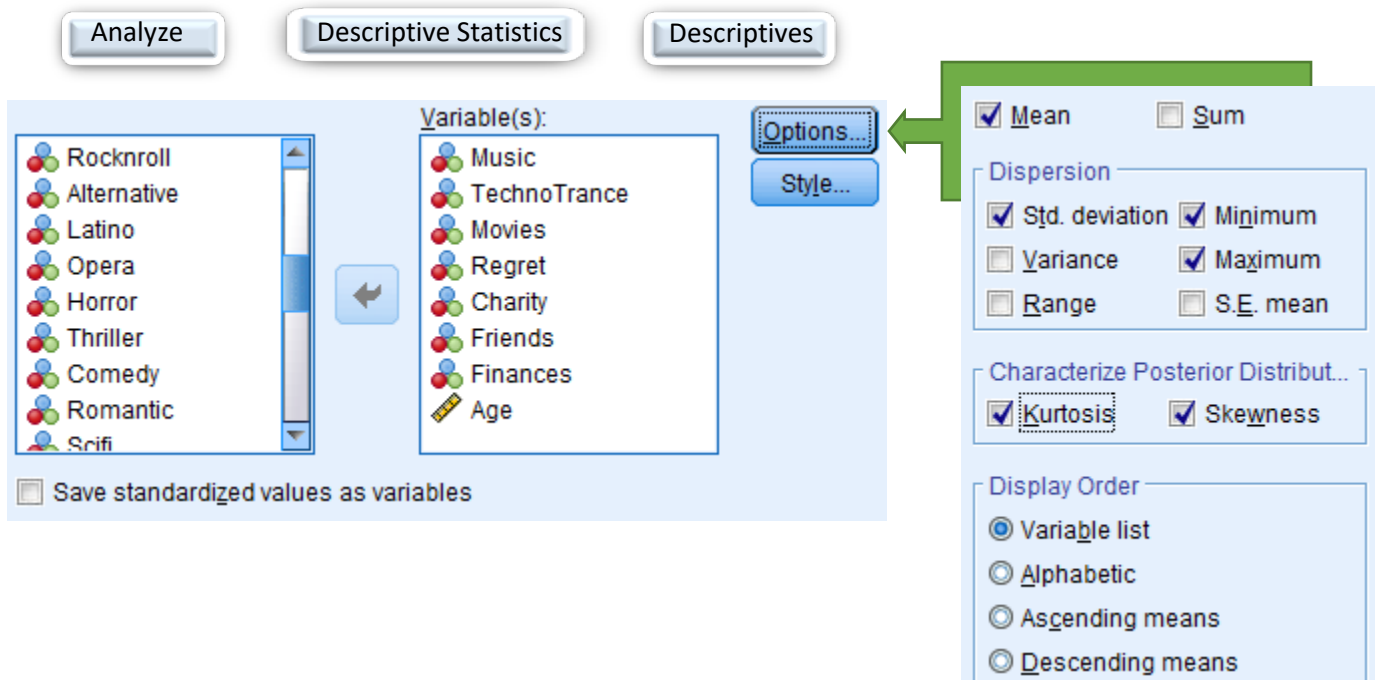- Root Names (One Per Selected Variable): dum_
- Macro Name:

Instructions. Download the Young People Survey data and create descriptive data of the relevant variables. Then, check the assumptions for analysis.

Data: This dataset was collected from 1010 statistics students and their friends at the Comenius University in Bratislava. The survey was administered in Slovak language and later translated into English.

1. Run descriptive Statistics (Sample size, frequency/percentage, skewness, kurtosis) for categorical/nominal variables (Alcohol and Gender).


2. Run descriptive statistics (sample size, mean, median, standard deviation, range, skewness, and kurtosis) for continuous/ordinal variables (Music, Movies, TechnoTrance, Finances, Age, Regret, Charity, Friends).
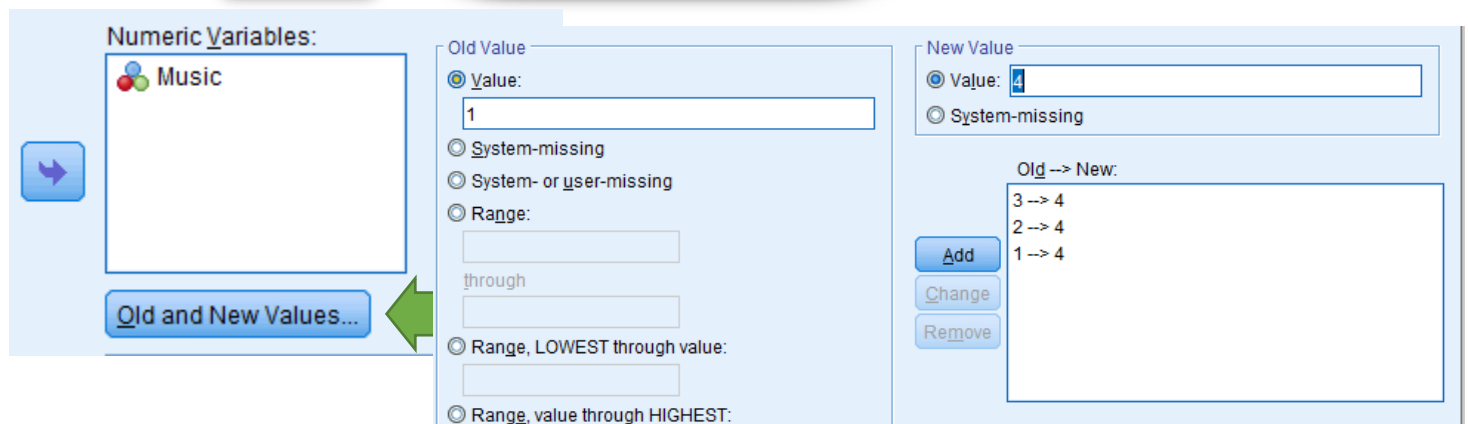
Instructions. Download the Young People Survey data and create descriptive data of the relevant variables. Then, check the assumptions for analysis.

1. Normality – Can be evaluated with the Skewness (want values between -2 and 2) and Kurtosis (want values between -7 and 7) values obtained during descriptives or by visually evaluating histograms. Create histograms using the following:

   Graph ➡ Legacy Dialogues ➡ Histogram

   Variable:
   👥 Music
   ☑ Display normal curve
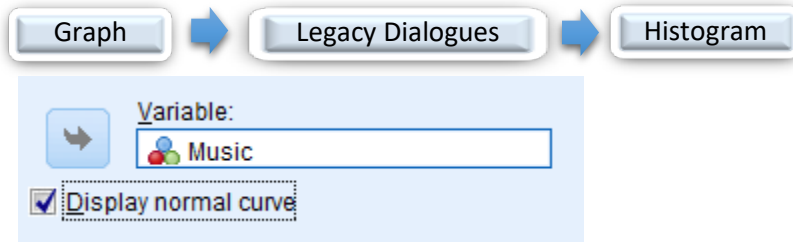
   a. Which variable is not normally distributed? _____

   b. Transform this variable so that the categories are "Likes Music A Lot" (Strongly Agree – 5) and "Does Not Like Music a Lot" (everything else – 1 to 4)

   Transform ➡ Recode into Same Variable

   Numeric Variables:
   👥 Music

   Old Value
   ◉ Value:
   [1]
   ○ System-missing
   ○ System- or user-missing
   ○ Range:
   [ ]
   through
   [ ]
   ○ Range, LOWEST through value:
   [ ]
   ○ Range, value through HIGHEST:

   New Value
   ◉ Value: [4]
   ○ System-missing

   Old --> New:
   3 --> 4
   2 --> 4
   1 --> 4

   [Add]
   [Change]
   [Remove]

   [Old and New Values...]

   c. Re-run skewness/kurtosis or create a histogram with this variable to make sure it is sufficiently normal now.

2. Independence – Review the dataset. Is every participant only in it once?

3. Homoscedasticity (Equality of Variances) and Linearity

   Graph ➡ Legacy Dialogues ➡ Scatter/Dot ➡

   Simple Scatter | Matrix Scatter | Simple Dot
   Overlay Scatter | 3-D Scatter

   a. Add Finances, Alcohol, Age, Charity, Regret, Gender and Friends to "Matrix Variables"

   b. Review graphs in the "Finances" column to make sure they are all equally distributed and none look funnel shaped.

   c. Optional: Graph music and age as a simple scatter plot to see what heteroskedasticity (funnel shape) could look like

4. Multicollinearity – Run tolerance test with Regression

Instructions. Use the Young People Survey data to perform a correlation in SPSS.

Data. This dataset was collected from 1010 statistics students and their friends at the Comenius University in Bratislava. The survey was administered in Slovak language and later translated into English.

Objective. To investigate the relatedness of music and movie preferences.

Hypothesis 1. People who enjoy music will also tend to enjoy movies.

Hypothesis 2. _____

1. Look at the questionnaire and variables and come up with a second hypothesis of the relatedness of two ordinal or continuous variables (e.g., Could see if a certain type of music is correlated with a certain type of movie preference).

2. Analyze ➡ Correlate ➡ Bivariate

3. Select the following variables and options, then press OK:
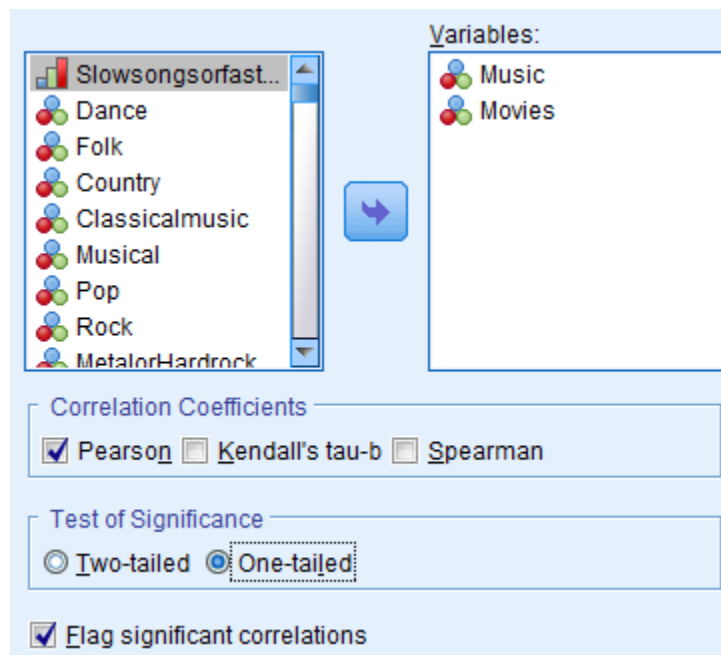
Spearman's correlation is non-parametric (data doesn't require normality, but it's a weaker test)

Is your hypothesis one directional (hypothesized positive or negative correlation) or could it be either (select two-tailed test)?

4. Now repeat with your hypothesis 2 variables.
5. Write a sentence about the conclusion for each hypothesis:

Hypothesis 1: _____

Hypothesis 2: _____

Instructions. Use the Young People Survey data to perform an *t*-test in SPSS.

Data. This dataset was collected from 1010 statistics students and their friends at the Comenius University in Bratislava. The survey was administered in Slovak language and later translated into English.

Objective. To investigate whether men and women differ in their movie and music preferences.

Hypothesis 1. Women will enjoy romantic movies more than men.
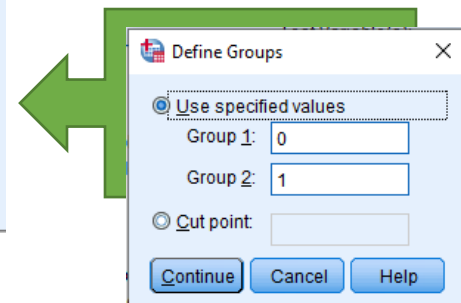
Hypothesis 2. _____

1. Look at the questionnaire and variables and come up with a second hypothesis of the relatedness of one categorical and one ordinal or continuous variable (e.g., Could see if women like classical music more).

2.
Analyze ➡ Compare Means ➡ Independent-Samples t-test

3. Select the following variables and options, then press OK. After placing Gender in the grouping variable click "define groups" and enter 0 and 1 (the numbers that coded for male and female):
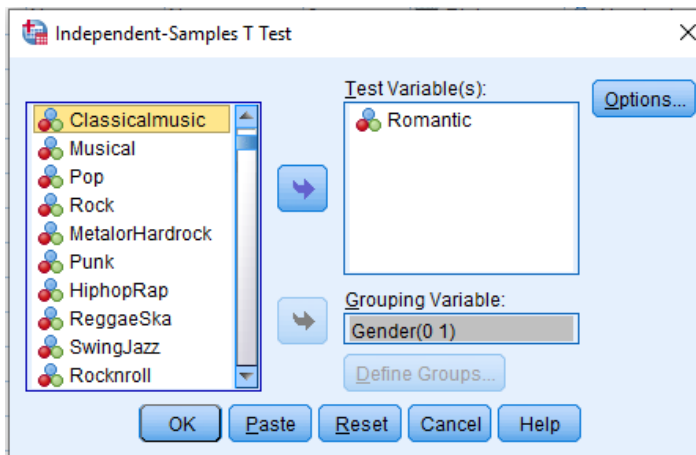
> If one person was in both groups this would be "paired-samples." E.g., comparing pre-test and post-test

Independent-Samples T Test ✕

Test Variable(s):
- Classicalmusic
- Musical
- Pop
- Rock
- MetalorHardrock
- Punk
- HiphopRap
- ReggaeSka
- SwingJazz
- Rocknroll

Romantic

Options...

Grouping Variable:
Gender(0 1)

Define Groups...

OK   Paste   Reset   Cancel   Help

Define Groups ✕

◉ Use specified values
Group 1: 0
Group 2: 1
◯ Cut point:

Continue   Cancel   Help

4. Now repeat with your hypothesis 2 variables.
5. Write a sentence about the conclusion for each hypothesis:

Hypothesis 1: _____

Hypothesis 2: _____

Instructions. Use the Young People Survey data to perform an ANOVA in SPSS.

Data. This dataset was collected from 1010 statistics students and their friends at the Comenius University in Bratislava. The survey was administered in Slovak language and later translated into English.

Objective. To investigate the relatedness of drinking alcohol on affinity for music.

> Hypothesis 1. People who drink a lot of alcohol will like pop music more than social drinkers, and social drinkers will like pop music more than non-drinkers.
>
> Hypothesis 2. _____

1. Look at the questionnaire and variables and come up with a second hypothesis of the relatedness of one nominal (categorical) and one continuous variable (e.g., Could see if people who spend more time online have certain music or movie tastes).

2. Analyze ➡ Compare Means ➡ One-Way ANOVA

3. Select the following variables and options, then press OK:

4. Now repeat with your hypothesis 2 variables.
5. Write a sentence about the conclusion for each hypothesis:

   Hypothesis 1: _____

   Hypothesis 2: _____

Instructions. Use the Young People Survey data to perform an ANOVA in SPSS.

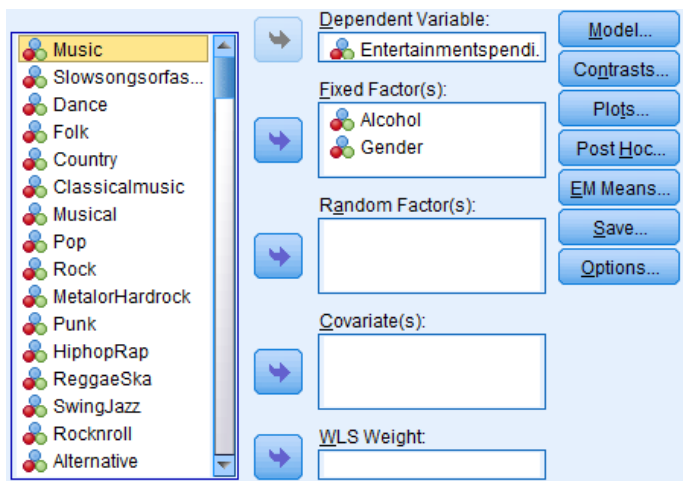Objective. To investigate the relatedness of alcohol and gender on entertainment spending.

Hypothesis 1a. People who drink a lot of alcohol will spend more money on entertainment than social drinkers, and social drinkers will spend more on entertainment than non-drinkers.

Hypothesis 1b. Men will spend more money on entertainment than women.

Hypothesis 1c. Drinking in men will lead to bigger differences in entertainment spending than it will for women such that men who drink more will spend significantly more on alcohol than women.

1. Analyze ➡ General Linear Model ➡ Univariate

2. Select the following variables and options, then press OK:

Move Alcohol and Gender to "Post-hoc tests for" and check "Tukey."

Check descriptive statistics, estimates of effect size, and homogeneity test.

3. Enter the means and the marginal means into the following table:

	No Drinking	Social Drinker	Heavy Drinker	
Men				
Women				
				N = 996

4. Write a sentence about the conclusion for each hypothesis:

Hypothesis 1a: _____
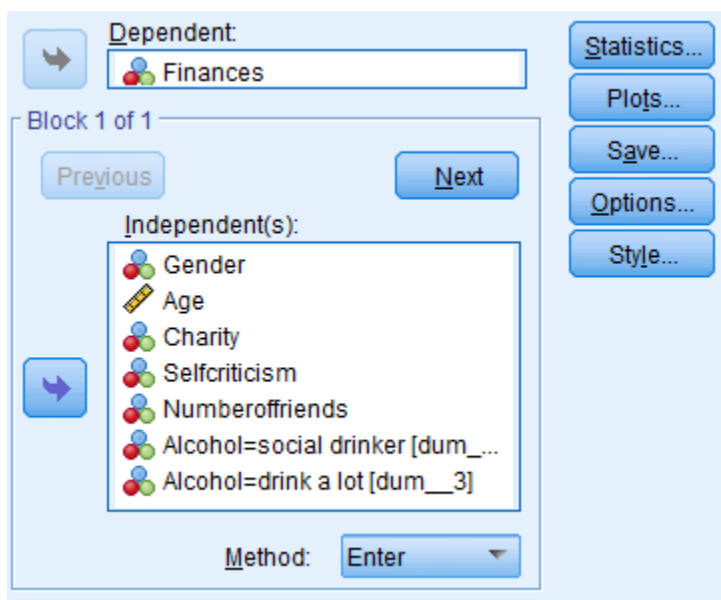
Hypothesis 1b: _____

Hypothesis 1c: _____

Instructions. Use the Young People Survey data to perform a multiple regression in SPSS.

Objective. To investigate whether people who drink alcohol are less likely to save money than people who do not drink.

> Hypothesis 1. People who drink a lot and drink socially will save less money than people who do not drink alcohol when controlling for age, gender, the propensity to give to charity, the number of friends, and the propensity for regret.

1. Analyze ➡ Regression ➡ Linear

2. Select the following variables and options, then press OK:

Dependent:
Finances

Block 1 of 1

Previous   Next

Independent(s):
- Gender
- Age
- Charity
- Selfcriticism
- Numberoffriends
- Alcohol=social drinker [dum_...
- Alcohol=drink a lot [dum__3]

Method: Enter

Statistics...
Plots...
Save...
Options...
Style...

Check estimates, model fit, and collinearity diagnostics.

Note. You can change how the analysis deals with missing data in "options." The default is fine for now.

3. Write a sentence about the conclusion for the hypothesis:

Hypothesis 1: _____

4. Fill in the following APA table with the multiple regression results

Predictor	B	SE B	β
Male			
Age			
Charity			
Regret			
Friends			
Alcohol (Never Drinker vs.)			
Social Drinker			
Heavy Drinker			

*p < .05. **p < .01. ***p < .001.*