SPSS Assignment 3 Answers

JP

4/15/2022

# Context (20 points)

You are interested in looking at depression levels in a sample of college students. You were originally interested in the relationship between body mass index (BMI) categories and depression levels. Specifically, that there would be differences between normal BMI (< 25), overweight (25 – 29.99), and obese (>= 30) categories. You then became interested in whether these differences in BMI categories was dependent on if one’s race/ethnicity was Latinx/a/o or not. You hypothesize that there would be a significant interaction between BMI categories and race/ethnicity on depression levels. Conduct the test that would be used to answer your hypothesis.

1. Create a depression composite score (2 points)

* include your initials for full credit in the variable name

1. Create categories for BMI (2 points)

* Normal = BMI < 25
* Overweight = BMI = 25 to 29.99
* Obese = BMI >= 30

1. Create categories for Race/ethnicity (2 points)

* 4 –> 1 (latino group)
* every other category (0, 1, 2, 3, 5, 6) –> 2 (not latino group)

1. Run descriptives statistics (2 points)

* report the mean and SD for the composite score
* run descriptive statistics for:
  + your depression variable
  + bmi (continuous)
  + new bmi variable (categorical)
  + your new race/ethnicity variable

1. Check the Assumptions (1 point)

* Does your data look normal based on the tests and visuals?
* Are there outliers? Which participants are outliers if there are any?

1. Conduct the inferential statistic for your two-way ANOVA (2 points)
2. Report all the F statistics (2 main effects & 1 interaction; 3 points)

* should look like this: F(#, #) = F value, p value

1. Show a visualization of the interaction (3 points)
2. Look at the simple effects and tell me what specific groups are significantly different from one another (1 points). Please note these are examples below. You will tell me the exact groups that are different.

* It should look something like:
  + In the Latino/non-Latino group, \_\_\_\_\_ and \_\_\_\_\_ were significantly different
* Or if you ran it the opposite way
  + In the normal BMI group, \_\_\_\_\_ and \_\_\_\_\_ were significantly different

1. Tell me what is statistically significant (2 points)

* What F test is/are significant?
* What post-hoc comparisons are statistically significant (if any)?
* What groups are significant in your simple effects analysis?