spss\_assignment\_4

JP

5/2/2022

# Context (20 points)

You are interested in looking at stress levels in a sample of college students. You are interested in two variables and the role that they may have on stress. First, you are interested in the role that smartphone use has on college students’ stress levels. Secondly, you are interested in the relationship between email and stress levels. You will be conducting a multiple linear regression (IV1 + IV2 –> DV). (**You’ll use the JP Thesis Dataset**). You’ll first do a simultaneous regression then a hierarchical regression. Save the output and include it in canvas in addition to the word document. You will be submitting the output; this means you won’t be screenshotting or sharing the output with me. Please reach out if you have questions.

1. List the null and alternative hypotheses for both relationships you are testing. (2 points)

H0 (smartphone use):

H1 (smartphone use):

H0 (email):

H1 (email):

1. Create a composite score for stress (2 points)

* include initials for full credit

1. Create a composite score for smartphone use (2 points)

* include initials for full credit

1. Create a composite score for email (2 points)

* include initials for full credit

1. Run descriptive statistics for stress, smartphone use, and email (all composite scores; 2 points)

* report the means and SD for all composite scores here

1. Check the assumptions (1 point)

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

7a. Conduct a simultaneous multiple linear regression (smartphone –> stress) (1 point)

7b. Conduct a hierarchical multiple linear regression (smartphone + email –> stress) (1 point)

1. Report the F statistic for the final/last model in your hierarchical multiple linear regression (1 point)

* Note: It should be exactly the same as the simultaneous regression model. Also, fill in the blanks below of the degrees of freedom, F value and the corresponding p value. If p = .000 then make it p < .001.

F(#, #) = F value, p value

1. Report the R Squared Value for the final multiple regression model (the amount of variance accounted for; 1 point)

R2 = %

1. Report the unstandardized and standardized regression coefficients for the final multiple regression (2 points)

* copy beta values for standardized regression coefficient

smartphone (b = #, β = #, p = ) email (b = #, β = #, p = )

1. Tell me what the unstandardized regression coefficients are and the interpretation for the multiple regression (2 points)

For a one point increase in \_\_\_\_\_, there is a (increase/decrease) in \_\_\_\_\_\_.

For a one point increase in \_\_\_\_\_, there is a (increase/decrease) in \_\_\_\_\_\_.

1. Write up your findings for the final multiple regression (1 point)

A multiple linear regression was conducted examining the associations between \_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_. Overall, the model was (significant/non-significant) F(#, #) = F value, p value and accounted for \_\_\_\_% in stress levels. There was a (significant/non-significant) association between \_\_\_\_\_\_ and \_\_\_\_\_\_ (b = #, β = #, p = ). For a one point increase in \_\_\_\_\_, there is a (increase/decrease) in \_\_\_\_\_\_ (only if significant). There was also a (significant/non-significant) association between \_\_\_\_\_\_ and \_\_\_\_\_\_ (b = #, β = #, p = ). For a one point increase in \_\_\_\_\_, there is a (increase/decrease) in \_\_\_\_\_\_ (only if significant).