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PRE-LAB 6: MEDICAL SCHOOL QUALITY OF LIFE

Testing (One Group Means)

- Week 3: Hypothesis Testing (Two Group Means)
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- **Week 6: Correlation and Regression**

Readings
Reading Check due May 03, 2016 at 17:00 UTC

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Pre-Lab

In a 2015 study, Tempski and associates examined a measurement they called Quality of Life among medical school students in Brazilian medical schools. They borrowed measurement scales from the World Health Organization, the Dundee Ready Education Environment Scale, and the Beck Depression Inventory to assess the dependent variable in potential relation to a number of predictor variables.

Pre-Lab due May 03, 2016 at 17:00 UTC

Lab
Lab due May 03, 2016 at 17:00 UTC

Problem Set
Problem Set due May 03, 2016 at 17:00 UTC

(2/2 points)

Review of Regression Analysis

In this lab, you will use Regression Analysis to answer a question of interest. Let's start by remembering why we use Multiple Linear Regression Analysis.

1a. In a Multiple Linear Regression model, not only can we compare overall model fit, but for each predictor we can also find the _____.

- (•) slope and significance ✔
- ( ) simple regression value
- ( ) Pearson Correlation
- ( ) Cook's Distance

1b. Which measure, asked for after we run our Multiple Linear Regression model, tells us the unique proportion of variance accounted for by each predictor?

- ( ) the multiple R-squared value
- (•) the part (or semi-partial) correlation squared value ✔

- the standardized beta values
- the standardized beta values, squared

You have used 1 of 1 submissions

(1/1 point)

Lab Preparation

In this lab you will be working with the Tempski et al. data on Brazilian medical students.

1. Open RStudio. Make sure you've installed the SDSFoundations package.
2. Type **`library(SDSFoundations)`**. This will automatically load the data for the labs.
3.Type **`res <- TempskiResilience`**. This will assign the data to your Workspace.

Alternatively, you can use the steps in the "Importing a Data Frame" R tutorial video, and use the TempskiResilience.csv file. (Right-click and "Save As.") Make sure to **name** the dataframe "res" when importing.

1. Open RStudio.
2. Click on the "Import Dataset" button at the top of the workspace window. Choose *"from text file."*
3. Click on the location of the TempskiResilience.csv file you just downloaded.

4. Click on the TempskiResilience.csv file. Then, click Upload.

Feel free to use the script from the week's PreLab, which you can modify for use in this Lab.

2. **Two** of the following questions will be answered in this lab using **Linear Regression**. Select the questions that can be answered with this method.

- [x] Of the four measures of Quality of Life (Physical Health, Psychological, Social Relationships, and Environment), which has the greatest impact on Med School Quality of Life? ✔
- [x] What is the overall proportion of varaince explained by the predictors in the model? ✔
- [ ] Can program selection group be predicted by Quality of Life and Resilience?

✔