



## UTAustinX: UT.7.20x Foundations of Data Analysis - Part 2



Bookmarks

- ▶ Important Pre-Course Survey
- ▶ Contact Us
- ▶ How To Navigate the Course
- ▶ Discussion Board
- ▶ Office Hours
- ▶ Week 0: Introduction to Data (Optional Review)
- ▶ Week 1: Sampling
- ▶ Week 2: Hypothesis

Week 6: Correlation and Regression &gt; Pre-Lab &gt; Conduct the Analysis

Bookmark

Reflect on the Question

Analyze the Data

Draw Conclusions

## Primary Research Questions

- 1) Can you confirm the claim that Beck Depression Inventory score is a significant predictor of Overall Quality of Life among students enrolled in the Clinical Sciences program?
- 2) For students enrolled in the Clinical Sciences program, examine the effects of DREEM: Social Self Perception, DREEM: Academic Self Perception, Resilience, BDI, and Age on Med School Quality of Life?

## Conduct the Analysis in R

## Testing (One Group Means)


- ▶ Week 3: Hypothesis Testing (Two Group Means)

- ▶ Week 4: Hypothesis Testing (Categorical Data)


- ▶ Week 5: Hypothesis Testing (More Than Two Group Means)

- ▼ Week 6: Correlation and Regression

### Readings

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

### Lecture Videos

Comprehension Check due May 03, 2016 at 17:00 UTC 

### R Tutorial Videos

### Pre-Lab

1. Type or copy the script from the Prepare for the Analysis section into the Script window of R.
2. Select the portion of the code you wish to run, then press "ctrl+ enter."
3. Output can be found in the Console window.

(2/2 points)

#### Research Question 1:

1a) What is the initial correlation coefficient between overall Quality of Life and Beck Depression Inventory? (Round to three decimal places.)

-0.375



Answer: -0.375

−0.375


1b) What is the t-value of the Simple Regression slope for Beck Depression Inventory? (Round to three decimal places.)

-8.935




Answer: -8.935


−8.935

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 

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

(3 points possible)

#### Research Question 2:

2a) What is the R-squared value for the overall model? (Report as a percentage, and round to 2 decimal places.)

14.04



Answer: 33.37

14.04

2b) What is the Adjusted R-squared for the overall model? (Report as a percentage, and round to 2 decimal places.)

13.86



Answer: 32.69

13.86

2c) What is the F-value for the overall model? (Round to 2 decimal places.)



Answer: 48.59

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

(3/4 points)

**Research Question 2:**

3a) The Standardized Beta for DREEM Social Self Perception is (Round to three decimal places):



Answer: 0.387

3b) This means that as DREEM Social Self Perception increases by \_\_\_\_\_ standard deviation(s), the outcome of Med School Quality of Life increases by \_\_\_\_\_(Round to three decimal places):



Answer: 1.000



Answer: 0.387

3c) What amount of **unique** variance can be accounted for in the model by DREEM Social Self Perception? (Report as a percentage and round to two decimal places.)



Answer: 8.23

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

(1/1 point)

**Research Question 2:**

4) According to the results from the full Multiple Regression Model, what is the **best** predictor of Med School Quality of Life, among Clinical Science students?

☐ BDI

☒ DREEM Social Self Perception ✓

☐ DREEM Academic Self Perception

☐ Resilience

[Click here for a video explanation of how to answer this question.](#)

*You have used 1 of 1 submissions*

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