Homework assignment 05

Use black text (if possible) for everything you include in this document. Keep both your answers and the original questions. Save this document in PDF format and submit it on Canvas. Include your last name, the course number and the module number in the name of your file.

1. Show a documentation header. The documentation header is a description of who wrote the program, when it was written, what the purpose of the program is (briefly), and what restrictions (if any) that you may place on the program. For SPSS, you can just type the documentation as free format text. For other programs, you might use the comment feature (such as /\* and \*/ in SAS).

The following is the assignment from last year. I am keeping it around until I finalize this year’s assignment.

This assignment addresses visual representation of data. The point of this assignment is to create a specific graph for a given data set.

**Instructions:** Each Step has a set of directions. Please follow those directions. Also, type answers in a font color that is not black.

**Step 1:**

Open the SPSS Instructions found in this Week’s Module under Resources for Week 4.

This document provides SPSS instructions for the creation of 8 different graphs.

1. Create the graphs by completely following the provided SPSS instruction guide for each.
2. Copy and Paste each completed graph (in the order from the instruction guide) here.
3. Write a SHORT interpretation of each graph (Describe what the graph tells the reader).
4. Each graph must be titled by you using your own unique title.

All data sets for Step 1 are provided in the Resources for Week 4.

**Step 2:**

Complete the following 2 Tasks using the specific designated data set. Select a graph type to accurately depict the data.

Use the SPSS instructions provided in Resources and used in Step 1 (Variables to create the graphs will be specific to these data sets.)

Read the directions below and follow precisely.

Task 1. Diabetes is a disease affecting the insulin producing glands of the pancreas, Beta cells. If there is not enough insulin produced by the Beta cells, the level of glucose in the blood will be high. Eating a meal/snack… will increase blood glucose. A normal fasting Blood Glucose is < 100 mg/dL. A blood glucose level above 140 for an extended period of time is considered not normal.

The purpose of this task is to visually depict the relationship between *time after eating* and *blood glucose in mg/dL* for each of the 3 people in this data set. The three people each represent a different level of beta cell response (fasting and following eating).

1. Open the data set: HW Graphing – Blood Glucose.
2. Create one single graph that depicts Blood Glucose over the course of a 210 min time period (fasting to 210 min) for each of the three people so that data for each of the three people can be seen and compared. (Do not create 3 graphs)
3. Copy and paste this one single graph into the Homework document here.
4. Why did you select this graph type?
5. Interpret the graph:
   1. Any accurate interpretation in terms of beta cell function, blood glucose in relation to eating and time, presence of diabetes…will be accepted.

Task 2 on next page

Task 2.Cholesterol is a lipid, occurs naturally in the body and is necessary for maintaining life. Cholesterol is made in the liver. Cholesterol is also ingested in the diet. Total cholesterol is a measure of High density Lipoproteins, Low density lipoproteins and other lipid components. Total cholesterol is measured as mg/dL. Cholesterol levels tend to increase with age. Males tend to have higher cholesterol levels than females. Normal levels should be well under 200 mg/dL. Levels between 200 and 239 are boarder-line high and a finding greater that 240 is of concern.

Open the HW data set HW Graphing - Cholesterol.

Follow the directions below to complete this task:

Graph 1: Make a graphic representation of *Race*

* + Identify the type of data for each variable. Race \_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Copy and paste this graph into the Homework document here.
  + Why did you select this graph type?
  + Explain what the graph means in terms of the data. (Interpret the graph). Be very brief in your explanation.

Graph 2: Make a graphic representation of the relationship between *Weight* and *Cholesterol*

* + Identify the type of data. Weight \_\_\_\_\_\_\_\_\_ Cholesterol \_\_\_\_\_\_\_\_\_
  + Copy and paste this graph into the Homework document here.
  + Why did you select this graph type?
  + Explain what the graph means in terms of the data. (Interpret the graph). Be very brief in your explanation.

Graph 3: Make a graphic representation of the relationship between *Weight\_group* and

*Cholesterol.* Add 95% CI Error bars.

* + Identify the type of data. Weight\_group \_\_\_\_\_\_\_\_\_ Cholesterol \_\_\_\_\_\_\_\_\_
  + Copy and paste this graph into the Homework document here.
  + Why did you select this graph type?
  + Explain what the graph means in terms of the data. (Interpret the graph). Be very brief in your explanation.

Graph 4: Make a single graphic representation of the relationship between *Weight\_group* and

*Cholesterol* for each *Sex*

* + Identify the type of data. Weight\_group \_\_\_\_\_\_\_ Cholesterol \_\_\_\_\_\_\_\_ Sex \_\_\_\_\_\_\_\_
  + Copy and paste this single graph into the Homework document here.
  + Why did you select this graph type?
  + Explain what the graph means in terms of the data. (Interpret the graph). Be very brief in your explanation.