



Week 7 Lab Assignment

Name:

Instructor Name: Varalakshmi Balaji

Please use this template to help answer the questions listed in the lab instructions. The “steps” below refer to the steps listed in the lab instructions. Type your answers and post your screenshots in the spaces given.

1. Write a paragraph summarizing what you learned from the articles provided. Consider the use of confidence intervals in health sciences with these articles as inspiration and insights.

The range of values believed to include the population value under investigation is called a confidence interval (CI) (El-Masri, 2012). If a sample of data were to be gathered, plotted on a table or graph, averaged, and the confidence interval (CI) established, this shows that the real population mean is within the lower and upper borders of the CI. A 90%, 95%, or 99% confidence interval is possible. Large confidence intervals (CIs), such as the 90% CI, might suggest that not enough data were gathered or that you are not quite sure that the sample you have is accurately reflective of the mean. The narrower the confidence interval (CI), the closer it is to the true mean value of the sample set, and the less space for error, the better it can reflect the population mean.

In the health sciences, 95% CI is more commonly used. Other researchers decide to use the mean of two confidence intervals to determine its statistical significance. They would thus use the mean of two confidence intervals (CI); if the CI ranges overlap, the difference in the mean value is not statistically significant. This is in contrast to concentrating solely on two different confidence intervals and their bounds. If there is no overlap, however, the mean value is statistically significant.

Sampling Method Used In this investigation, a systematic sampling strategy was used. This process was used to determine the participants' height data.

Advantage Systematic sampling is a survey approach that involves the sequential selection of components from an organized population. This method offers less options for data manipulation and is quick and easy to utilize.

Faults of the Systematic Method Drawbacks A higher danger of data tampering and the over- or underrepresentation of certain patterns are a couple of the flaws or drawbacks.

Other Alternative Sampling Methods The stratified strategy would have been better even if the systematic approach is easier to implement. It ensures that every demographic category is fairly represented in the sample. Stratified random sampling provides better coverage of the population since the researchers have control over the subgroups and can guarantee that each is represented in the sampling.

Data Collection

Use the data set you collected for the Week 5 lab (heights of 10 different people plus the 10 heights provided by your instructor). **(NOTE:** This is NOT the data used in the lab video, which is about midterm grades. Do not use the midterm grades data.)

Provide a screenshot of your Week 5 Data (20 Heights)