

Reflection

In my sociology statistics class, I learned a great deal of valuable information. We covered 11 different topics, which included introductory skills in how to use the R Studio and SPSS software programs. These are two different statistical programs that can calculate and re-code data. With that, I learned how to re-code data in order to generate specific findings and present them a certain way. With the research and statistics we did, I learned how to write and construct a research study paper. Taking it step by step not only made it simpler, but allowed me to grasp the concept of a research study much better. I know how to think deeper and more critically, which will assist me in gaining as much knowledge and skills as I can going forward.

In my statistics manual, there are 11 chapters. Throughout this manual are the following topics: measures of central tendency, measures of variability, Z-scores and probability, confidence intervals, T-tests, ANOVA, Chi-squared test, Pearson's correlation coefficient, and regression. I learned how to calculate most of these topics by hand, as well as using the software programs. Personally, I like doing the by-hand calculations, so it is even more beneficial to know how to calculate data multiple ways. Measures of central tendency are in regards to mean, median and mode. Measures of variability show us how to find the range, variance and standard deviation of a distribution with a continuous variable. Z-scores and probability is in regards to calculating the probability of a Z-score, which tells us the relationship to the mean. Confidence intervals tell us how to find the standard error at the 68%, 95%, and 99% confidence intervals. T-tests are used to determine the significant differences between the means of two groups. The ANOVA, which is the analysis of variance, checks if the means of each group have significance from each other. The Chi-squared test is run to compare observed results with the expected results. Pearson's correlation coefficient is used to tell us the strength and direction of a linear

association between two variables. Lastly, regression estimates the relationship between the dependent variable and one or more independent variables. This allows us to estimate the conditional expectation of the dependent variable when the independent variable takes on a given set of values.

The things I have learned in this class are important to know, but not just for the purpose of a good grade. This matters in a larger context for a number of reasons. Like previously mentioned, I now have a clearer understanding of research papers and articles. They can sometimes be overwhelming to read and understand, but breaking each section down, as we did when writing the paper, simplifies it. I can also read and understand the data in research articles, whereas beforehand I didn't understand what any of the data or numbers were telling me. This is really important to me personally because reading and using articles is a huge part of college, graduate school, and a number of potential careers I could go into. They also contain a lot of fascinating, unknown facts, and I want to be able to understand all of it fully. After constructing a research study in class, I now have the tools to be able to do so myself, and can conduct studies on topics that interest me. It is important to learn basic statistics, as well as R Studio and SPSS for graduate school. Learning how to use these programs has given me skills that open doors for further schooling and more career opportunities. One could look at this class as just another credit, but taking it seriously could be thousands of dollars worth of a difference in your paycheck, among other gains.

I plan to use what I've learned in several different ways. First, I will better understand research articles when reading them, the data being presented, and how to conduct and write my own. Second, I will use my statistics manual throughout the rest of undergraduate school, in graduate school, and most likely in my future career. It was mentioned at the beginning of the

semester that these manuals are highly valuable in graduate school and make things much easier than without them. Both the criminal justice and psychology fields involve a lot of studies and data reporting, so this will undoubtedly assist me in the future. Lastly, I will continue to look over this manual and practice my skills in statistics, as it is a helpful tool going forward.