

SOCIOLOGY 2830 – METHODS OF DATA ANALYSIS: ANALYSIS PAPER PROJECT (70 POINTS/90 POINTS)

Due: At the Final Exam

ANALYSIS PAPER GUIDELINES

Purpose: The purpose of this paper is to work through a complete bivariate analysis from describing each variable, to conducting an appropriate analysis, and to finally interpret the results.

Point Option: You have the option to conduct your own SPSS Analysis, as stated in the assignment below, or choose your research question - email me individually - and receive a copy of the proper SPSS output for your research question. Your task then would be to analyze the output and write the paper as outlined in the assignment guide below. I will mark your copy of the output with a unique identifier so it cannot be shared with others.

IF YOU WANT TO CONDUCT YOUR OWN SPSS ANALYSIS - The '**SPSS Challenge**' - It could be worth up to 20 extra credit points. You would then follow the assignment guide as written. If you choose this option, however, you must consult me to ensure that your SPSS is on the right track and correct. If not, your analysis and paper will be incorrect. You will have until 5 pm on Tuesday August 11 to consult me on your SPSS - though the paper is due at 12:00 August 12, so best not to wait until the last minute!

Steps:

FIRST – CONSIDER ONE OF THESE RESEARCH QUESTIONS AND **PICK ONE TO FOCUS ON:**

- Does the number of hours worked differ between males and females?
 - Use variables:
 - 'hrs1'
 - 'sex'
- Does the number of hours spent on the Internet per week differ by someone's highest degree obtained?
 - Use variables:
 - 'wwwhr'
 - 'degree'
- Does support for the legalization for marijuana depend on someone's political views (recode 'polviews' to a dichotomous variable 1 – 3 = liberal; 4 – 7 = conservative)
 - Use variables:
 - 'polviews'
 - 'grass'
- Does support for the legalization of gay marriage depend on one's marital status?
 - Use variables:
 - 'marhomo'
 - 'marital'

SECOND – SET-UP YOUR RESEARCH:

- In one paragraph, answer these four questions:
 - Which variable is the independent variable and which is the dependent variable?
 - What is the null hypothesis for your research question?
 - How do you hypothesize the independent variable to affect the dependent variable?
 - Is this a one-tailed or two-tailed hypothesis test?

THIRD – CONDUCT A DESCRIPTIVE ANALYSIS OF EACH VARIABLE IN SPSS:

- Create a table of Descriptive Statistics Table that includes:

- The level of measurement of each variable
 - The **appropriate measure of central tendency** for your independent variable
 - The **appropriate measure of central tendency** for your dependent variable
 - The **appropriate measure of dispersion** statistic for your independent variable
 - The **appropriate measure of dispersion** statistic for your dependent variable
- Write a summary paragraph about each of your variables and their descriptive statistics. What are the averages? Do they have a wide or narrow dispersion? Are they relatively homogeneous, or are they distributed widely?

FOURTH – CONDUCT THE PROPER INFERENTIAL TEST OF YOUR ORIGINAL HYPOTHESIS IN SPSS:

- You will choose one inferential test (hint, each research question above can best be answered by using only one specific test; therefore, depending on the question you choose, you will also be choosing one of these tests!):
 - Independent-samples hypothesis test
 - ANOVA
 - Chi-square test (include the proper measures of association)
 - Make sure you complete each step associated with your hypothesis test
- Next, follow the **appropriate** 5-Step Hypothesis Test for your Research Question. Make sure you follow the 5-step format as in class lecture!
 - Making Assumptions and Meeting Test Requirements
 - Stating the Null and Research Hypotheses
 - Selecting the Sampling Distribution and Establishing the Critical Region
 - Compute the Test Statistic
 - Making a Decision and Interpret the Test Results
- Finally, if you complete a chi-square test and there is a relationship between your variables, how are they – and the relationship between them – associated?
 - Conduct the appropriate bivariate measure of association
- Write a summary paragraph describing your inferential hypothesis test, including why the test you chose was the most appropriate for answering your research question.

FIFTH – INTERPRET YOUR RESULTS BY ADDRESSING THESE QUESTIONS:

- What is your decision about the null hypothesis?
 - Do you reject the null hypothesis of 'no difference'?
 - Do you fail to reject the null hypothesis of 'no difference'?
- What do you conclude about the relationship between your variables?
- Was your initial hypothesis supported?

You will write up your results, following the above outline, making sure you address each point. Your paper should be **no longer** than 5 pages. Other Guidelines:

1. Use formal writing – no first person, dialog, or 'informal conversational' tone.
2. Use 12pt. Font, 1 inch Margins, and double space the text.
3. The text of your paper should report your SPSS results, but you do not have to copy and paste these results into the text.
 - a. Include a clean copy of your SPSS Output with the final paper.

Key things to consider:

1. Your SPSS Output and the data included are the justification for everything you write.
2. If you make a statement, such as "we reject the null hypothesis of no difference", then justify it with the data. Why did you reject it?
3. When you report a statistic, as outlined above, then state, for example, "the mean age for the sample is 45.5 years."
4. Write clearly and plainly. It is to your benefit.
5. Consult the sample paper on Blackboard.