Due by 4 PM, Friday December 13th - late papers will not be accepted except for dire circumstances (ex. death) with documentation

Papers should be handed in to Dr. Van Willigen (406A Brewster) or to the Sociology Dept. Staff (4th Floor Brewster Wing A) - Do NOT slip papers under office door - This paper cannot be turned in by E-mail.

About The Assignment

This research paper is designed to help you pull together and integrate the material we have been covering in class. The good news is that it does not require you to learn anything new, simply apply what we have already covered. One important thing that this paper will introduce you to is the basic format and organization used in writing up empirical research papers in the social sciences. In other words when you are required to read research articles in future classes they will be organized similarly to the way you will organize this paper.

In this research paper you will conduct a bivariate statistical analysis of one dependent variable of your choice from one of the three datasets on your data diskette. You will use three assigned independent variables in your analysis of the dependent variable. These assigned variables are sex, minority status, and age. You will then select four other independent variables that you expect to be related to your dependent variable.

The core of the paper will be your formulation of specific hypotheses about the relationships between the assigned and chosen variables and the dependent variable you have chosen. In doing this you will formulate hypotheses (both null hypotheses and research hypotheses) about each independent variable (the four you have chosen and the three assigned variables) and the dependent variable. You will then conduct appropriate statistical analyses to test each of these hypotheses. The statistical analyses will involve correlations, T-test of means, or crosstabs.

Style Requirements

Text: The paper must be typed, double-spaced, using a font that is large enough to read easily (12 point would be good). The paper should use 1 inch margins and pages should be numbered.

Grammar and Spelling: Treat this assignment, and any writing assignment you do for a sociology course, as if it were the writing sample you had been asked to provide by a prospective employer or a graduate school admissions committee. Do your best work! Proofread! Revise! Polish!

Title Page: The paper must have a separate title page which includes the following information: 1) a title for the paper (Note a title should be descriptive of what the paper is about, NOT what class has required you to do the paper), 2) your name, 3) your institutional affiliation (Department of Sociology, East Carolina University), 4) the number and name of this course, and 5) the date.

Tables: Your tables should be on separate sheets of paper (one table per page) and attached at the end of the paper. At the appropriate places in the body of your paper, you should include something like the following.

Table 1 about here

Each table should be numbered with Table 1 being the first one that you discuss in the text and Table 2 the second, etc. Each table should have a title that describes the information presented in the table. For example “Table 1: Pearson Correlations of Life Satisfaction, Substance Abuse, and Religion Among High School Seniors.”

Organization of Paper: In the section below I have described the five sections of this paper. You must use the headings for each section and follow the organizational format described below. This is an abbreviated form of the standard format for presenting empirical research papers.
**Required Outline**

This paper will be comprised of five sections which are described below. The five sections are: 1) Introduction; 2) Data, Measures and Hypotheses; 3) Analysis; 4) Results and Discussion; and 5) Conclusion.

**Introduction**

In the introduction you need to provide the reader with a description of what your research paper will do. First, you need to describe the topic you have chosen. Then you need to describe why you think this is an interesting or important topic. Approximately two well-crafted paragraphs should do the job.

**Data, Measures and Hypotheses**

**Data:** In this section of the paper you need to describe the data you will be using. You should describe the research method, research design, and sampling technique. You should also provide a description of your sample that follows the basic outline described in the second SPSS assignment you completed for the class. [In fact, if you use the same data for this assignment as you did for that assignment, you should be able to copy and paste from that assignment to fill in this section. However, make sure to make any necessary edits based on feedback from the instructor on your second SPSS assignment.]

**Measures:** You will be using two kinds of variables in your analysis: dependent variables (those you want to explain or investigate) and explanatory (or independent) variables which are those variables you expect to be related to your dependent variables.

In this section you need to describe how your variables are measured. In other words you need to convert the information about each variable you will use from the codebook or survey for your dataset. These are available on your data disk. This includes whether they are nominal, ordinal, interval, or ratio and also includes what the specific values of each variable represent (for example: Sex is a nominal variable in which male = 0, and female = 1.) Both your dependent and independent variables need to be described in this section.

**Hypotheses:** You need to formulate hypotheses (both Null and Research) for each independent variable and the relationship you expect it to have with the dependent variable. Your hypotheses for each independent variable must be stated using the null hypothesis/research hypothesis format we have discussed in class and you have seen in the book. Following that format, you will formulate specific hypotheses about the relationships between the assigned (sex, race, mom’s education) and chosen variables (4 of your choosing) and the dependent variable you have chosen. This will amount to formally stating a lot of hypotheses, but at the novice researcher stage of the game, this is good practice.

You should end up with **seven** research hypotheses and **seven** null hypotheses. Each research hypothesis you state should be accompanied by a brief explanation of why you expect to find what you have stated.

**Analysis**

Compared to the previous section, the analysis section of the paper will be pretty short. In this section you need to describe what kind of statistical analysis you will perform in order to test the hypotheses you stated in the previous section. This means that if you are going to use a correlation analysis to analyze one of your dependent variables, then you need to say that and write two or three sentences describing how correlations are interpreted (direction, strength, and statistical significance). This is a section where you explain to a reader with less statistical knowledge what a correlation does, and to readers like me, who have more statistical knowledge, you convince us that you know what you are talking about.

**Results and Discussion**

The results section of your paper will be divided into two parts: tables and text. To make the tables you will need to convert your SPSS output into the form of tables. In other words you cannot simple paste
the raw SPSS output into your paper. You, the researcher, need to eliminate the extra information that SPSS prints out, that readers do not need to be bothered with. You also need to make sure each table is numbered and has a title that describes the information presented in the table.

The text of your results section should begin with a univariate description of responses on your dependent variable. Ex. If you are studying perceptions of health among adults in Illinois, you should start your results section with a paragraph that describes how people in the sample perceived their health (using the frequencies command). Then, based on the statistical information presented in your tables you will then need to present your results pertaining to each hypothesis you have stated. For example, in a correlation analysis you would need to interpret the direction and strength of each correlation that relates to each of the specific hypotheses you stated in the “data, measures and hypotheses” section above. You also will decide whether to accept the Null Hypothesis or the Research Hypothesis based on the probability or statistical significance of the correlation. Basically you should write a paragraph about each hypothesis that you test. That paragraph should include an interpretation of the statistics (direction and strength in the case of correlations), an explanation of why you accepted either the Null hypothesis or the research hypothesis, and an explanation of why you think the results came out the way they did. In writing these explanations use sociological concepts and ideas.

If a relationship is not statistically significant, do I need to interpret the relationship? For example, in the case of correlations would you need to discuss the direction and strength of a correlation if that relationship is not statistically significant? The answer is “No.” If a relationship is not statistically significant using the .05 level, then you can conclude that there is no true relationship between those two variables among the population in question. So there is no need to interpret the direction and strength of the relationship because you are accepting the Null Hypothesis. If a relationship is not statistically significant, you can skip straight to explaining why you chose to accept the Null Hypothesis. You should, however, still offer some explanation of why there is no relationship.

Conclusion

This should be a concise paragraph that summarized and pulls together what your analysis has found, what you have learned from doing the analysis.

So, how long does this paper have to be?

The best answer is that this paper should be as long as it needs to be and no longer. However, here is a more specific guess:

The title page is 1 page. There will be a page for each table, so the tables will make 1-2 more pages. You can probably do the introductory section and the description of the data in 1-1.5 pages. The measures and hypotheses sections may well be the longest section of the paper. By the time you describe each of your measures (For example, Mother’s level of education is an ordinal variable ranging from “1 = Grade school” through “6 = Graduate School” with a mean of X and a standard deviation of Y, and a median of Z.), state your hypotheses (both Null and Research), and explain why you expect to find what you expect to find, that will probably take about 2 pages. Describing how you will do the analysis can be accomplished in one well-written paragraph or about one-half of a page. The results and discussion section should be about another 2 pages, and about a half a page for the conclusion.

So all together this amounts to about 9 pages: 1 title page, 2 pages of tables, 1-1.5 pages for introduction and description of data, 2 pages for measures and hypotheses, 2 pages for results and discussion, and another half page of conclusions.
Suggestions for how to approach doing this paper

Step 1:
- Don’t panic.

Step 2:
- Select your dependent variable.
- Think about four other attributes of the population we have data on (in addition to sex, minority status, and age) that might help explain differences on your dependent variable. In other words, identify four other independent variables.
- You are now ready to draft the following sections of this paper: the Title page, Introduction; Measures; Hypotheses.

Step 3:
- If you are using the same data as you used for assignment 10 (the second SPSS assignment), open that computer file and copy and paste the data description and sample description into your paper.
- Make any edits suggested on the second SPSS assignment.

Step 3:
- Run frequencies on every variable you will use in the analysis (dependent and independent). Remember you should have eight variables total.
- Recode or compute new variables as necessary. You may be interested in grouping respondents in other ways that are slightly different from the form the data are in.
- Run frequencies on any new variables you have created and double-check that the frequencies for your new variables match up with the old variables. (ex. If there were 230 people of various racial minorities on the original race variable, there should be 230 people designated as minorities in your new “minority status” variable.)

Step 4:
- Decide what bivariate techniques you will use to determine whether your hypotheses are correct.
- Based on your assessment of what techniques you will use and why, write up the Analysis section of the paper.

Step 5:
- Do the bivariate analysis of your variables. See instructions attached on how to run these techniques using SPSS.
- You are now ready to create your table(s). The number of tables you will have will depend on the number of different kinds of analytical techniques you use and how you group them in tables. You will likely have 1-3 tables depending on the types of variables you use (and therefore your analytical techniques).
- Note: You should make up your table(s) before you write results and discussion sections. Having your finished table(s) in front of you will make that process easier than simply using the raw SPSS output.

Step 6:
- You are now have all the information you need to write the “Results and Discussion” section of the paper making sure to interpret the significant relationships observed, as well as whether or not they support the Null or Research hypothesis in each case.

Step 7:
- Now you are ready to put all the pieces together in their proper order. After you have done that, reread the entire paper from beginning to end —proofread, polish, make it more clear!!! Once you have worked your way through the “Results and Discussion” section and have familiarized yourself with all the pieces of the paper and how they all fit together, THEN you are ready to write the Conclusion.
- Let the paper sit for a day or two. (NOTE: This requires getting to this point a day or two in advance of the due date.) Go back over the paper. Reread it in its entirety. PROOFREAD FOR CLARITY, GRAMMAR, SPELLING.
THINGS YOU WILL/MAY NEED TO BE ABLE TO DO IN SPSS

Opening your data, running frequencies, and assigning missing values: These were all described on previous assignment sheets. Go back to those sheets for directions for these things. They are posted on the website.

Recoding/Computing New Variables: You may want to compute other new variables that recode some of the original variables in new ways. For example, you could create a variable for whether they are a parent of dependent children by creating a new variable that is equal to 1 if they had 1 or more children and 0 if they said they had no children (Illinois data).

To compute a new variable, first make sure you are in the data view window (not output or variable view). Then click on Transform, then Recode, then Into Different Variables. (Note: Although you can recode an existing variable, we generally avoid doing that so that we don’t screw up our original variables.) You will now be in the Recode Into Different Variables dialogue box. To make sure you have done your recoding correctly, run frequencies on the old and the new variable and check that you have as many people in each category of the new variable as you should have.

Keep in mind that you may have to recode your variables if your hypotheses focus specifically on a more narrow distinction in the data we have. For example, if you hypothesize that parents are less depressed than people who are not parents, then you cannot simply use the number of children variable in the health subset because it does not compare people by whether they have children or not; it compares people on the basis of the number of children they have. In this case you would have to recode. If you hypothesize that upperclassmen are more satisfied with their lives than lowerclassmen, you will have to recode the class status variable in the student data so that you have upperclassmen versus lowerclassmen (instead of freshman, sophomores, juniors, seniors, grads).

Running Crosstabs: If you need to run crosstabs, click on Analyze, then Descriptive Statistics, then Crosstabs. Find your dependent variable in the list of variables to the left, click on it once, and then click on the arrow next to the Row(s) box (the top empty box). You should see your dependent variable in the Row(s) box. Next click on each of the assigned or chosen variables you need crosstabs for, and click on the arrow next to the Column(s) box. You should see each of them get added to the Column(s) box. Next click on the Statistics button (bottom of box) and click next to Chi Square (top left). Then click on the Continue button. Now click on the Cells button. Under Percentages, click on Column and Total. Then click on the Continue Button. Now click on the OK button. You will have a series of crosstab outputs in your Output file (1 for each independent variable you chose). Each will be accompanied by a Chi Square Tests box. Remember you want to look at the probability for the Pearson Chi Square. Ignore the rest.

Running Difference of Means: If you need to run difference of means tests, click on Analyze, then Compare Means, then Independent Samples T-Test. Find your dependent variable in the list to the left, click on it, and click on the arrow next to the Test Variable box. You should now see your dependent variable in the Test Variable box. Now choose one of the independent variables you need to run a difference of means test with. Click on it and then click on the arrow next to the Grouping Variable box. Now click on the Define Groups button under the Grouping Variable box. Fill in the values for two categories of the independent variable in question. (For example, if you were using Sex for any of the datasets, the two values would be 1 - Male and 2 - Female.) Now click on Continue and then click on the OK button. You will now have Difference of Means results in your output file. The means for each group will be listed in the Group Statistics box. The t-statistic level will be listed in the Independent Samples Test box. Note: Use the top t-statistic in the box (next to Equal Variances Assumed) and keep in mind that the probability listed is for a non-directional test. If you test is directional, that probability will not be accurate.

A couple of notes on running the difference of means test. First, unlike correlations and crosstabs, you can only run these test with one independent variable at a time. Second, if you have a variable with more than two categories, you will have to do one of two things: either pick a reference category and run the test multiple times (see below) or recode your variable into one or more dummy variables (coded 1 and 0) with only two categories (see above). If you choose the first approach, pick one group to keep constant each time (ex. category 1) then change the other group each time you run it, until you have t-tests comparing all of the other groups to category 1. The t-statistic in each case will tell you whether the mean for your dependent variable is significantly different for each group always in comparison to the first group. Most researchers would recode instead of doing this (or use another approach you haven’t learned).

Running Correlations: Click on Analyze, Correlate, then Bivariate. Double click on your Dependent Variable first, so that it moves into the empty Variables box. Then double click on any of your independent variables that you want to run Correlations with. Once you have all the variables you need in the Variables box. Click on OK.

You will now have a Correlation matrix in your output file. The first number in each cell is the correlation coefficient for the relationship between the two variables, the second number is the probability (p-value).