

*****SPSS 2 is due Wednesday April 19th, 2023 at the beginning of class (001) or on Blackboard by 11:59 PM via SafeAssign (DL1)**

This homework will test your ability to prepare cross-tabulations, bivariate graphics, and test for statistical association and significance. You will need to put this all together and interpret your results. For this assignment, you should have a cover page and begin each question on a new page. **There are 4 relationships to analyze—each worth 25%.**

For each of the following relationships listed below:

- a) **3 points** - Write both a research and a null hypothesis.
- b) **6 points** - Write a paragraph explaining your theory as to why you would expect to observe your hypothesized relationship.
- c) **5 points** - Prepare an appropriate cross-tabulation table that includes any relevant and only the appropriate statistics to test your hypothesis.
- d) **5 points** - Prepare a bar chart.
- e) **6 points** - Write a paragraph about the relationship that uses the inferences you can draw from looking at your table and analyzing your statistics.

Question	Dataset	Independent variable	Dependent Variable
1)	GSS 2012	marital	owngun (recode refused to missing)
2)	GSS 2012	kids	premarsx (reverse code premarsx)
3)	World 2012	Frac_Eth3	Gender_Equal3
4)	NES 2012	pid_3	dhs_threat3

*****Sample Answer Two Variable Comparisons*****

- a) Research and Null Hypothesis:
 - 1. Research Hypothesis: Those in the south are more likely to identify as Republican than those not in the south.
 - 2. Null Hypothesis: There is no relationship between whether someone lives in the south or not and party identification.
- b) Theory:
 - 1. Your theory is derived from how you *expect* your variables to be related and why.
 - 2. Develop your theory prior to running tests on your relationship.
 - 3. Your theory should be plausible and demonstrate a good understanding of both your IV and DV.

c) Crosstab with appropriate statistics (in APA format):

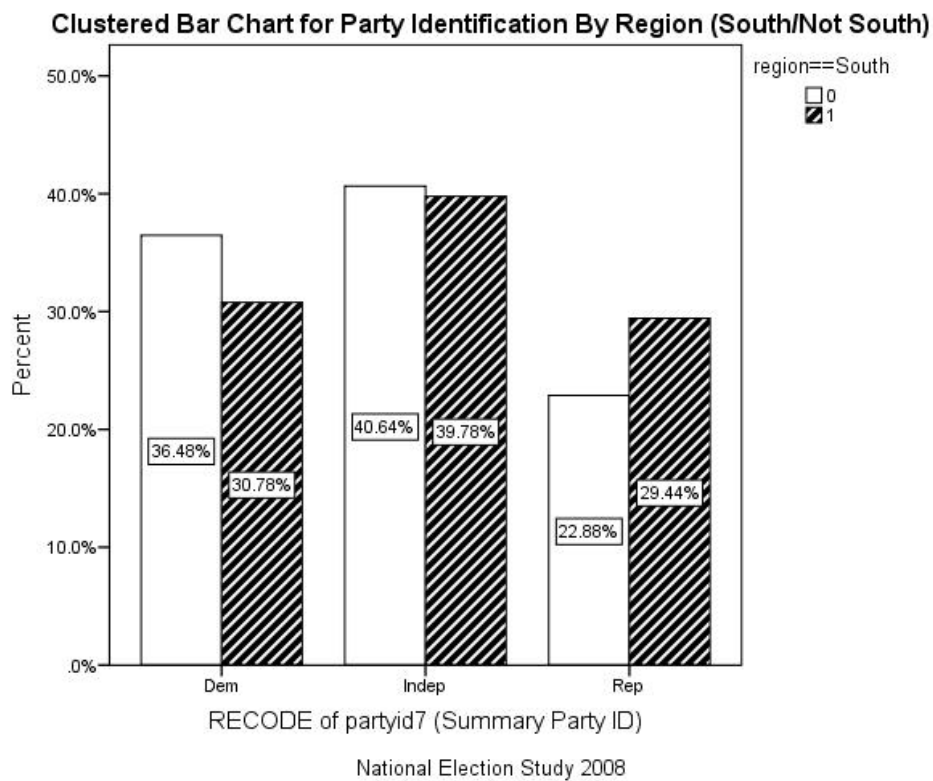
Party Identification By Region (South/Not South)^{a,b}

		Region		Total
		Not South	South	
Party Identification in 3 Categories	Dem	n	479	304
		%	36.5%	30.8%
	Indep	n	533	392
		%	40.6%	39.8%
	Rep	n	300	290
		%	22.9%	29.4%
Total		n	1312	986
		%	100.0%	100.0%

a. $X^2 (2) = 14.826, p = 0.001$; Phi = 0.08

b. National Election Study 2012

d) Clustered bar chart (in APA format):



e) Descriptive paragraph:

- Return to your theory—is how you expected the variables to be related supported by the crosstab and appropriate statistical test?
- Report the results of your test for statistical significance: value of the statistic, degrees of freedom, probability of making a type I error (p value).
- Make a decision about the null hypothesis (either reject the null and claim statistical support for your research hypothesis; reject the null but don't claim statistical support for your research hypothesis; or fail to reject the null hypothesis).
- Report the results of your test for degree and form, interpreting them appropriately.
- Discuss any additional details about your relationship that you think relevant.

SPSS2 Grading Rubric & Answer Key

1. Hypotheses statement (3/25 points) - 1.5 Hypothesis, 1.5 Null

- a. If you have a nominal IV, you must specify on these categories when writing your hypothesis.
- b. Avoid a nominal conceptualization of ordinal variables
- c. Avoid normative hypotheses.
- d. Avoid tautologies when writing your hypotheses.
- e. Avoid using proper nouns in your hypotheses.
- f. Do not reverse the IV and the DV. The IV causes the DV.
- g. Remember, we are not testing you on whether you can correctly predict an outcome! We are grading you on whether you can correctly interpret the statistics and determine if there is support for your hypothesis. Therefore, you must generate your hypotheses *before* you run bivariate statistics.

2. Theory behind hypothesis (6/25 points):

- a. Your theory needs to be reasonably plausible. Make sure that you have a clear understanding of both variables. Remember, the codebooks for World, NES, GSS and States are available online if you are confused about any of the variables. These can be really helpful in clarifying confusing variables.

3. Cross tabulation (5/25 points):

- a. Your crosstabs must have APA formatting. You can use the template and refer to the instructional video for doing an APA style crosstab for guidance.
- b. IV goes into columns (x-axis) and DV goes into rows (y-axis).
- c. Make sure that you have a title and a source. Chi Squared, significance and a measure of association should be a footnote as well.
- d. Your measure of association should be appropriate to your level of measurement. Remember, the lowest level of measurement should determine the measure of association that you use. (Ordinal by Ordinal=Somer's D, Tau B or Tau C; Dichotomy as either the IV or the DV=Phi; Nominal as either the IV or the DV=Cramer's V)
- e. Always include column percentages (do not include expected values).
- f. Gamma overestimates the strength of the relationship. It is recommended that you do not discuss Gamma, and thus you do not need to produce it for your table.

4. Clustered bar chart (5/25 points):

- a. This should be copied and pasted from SPSS. You need to add a title and the source.
- b. Remember, always put the IV into the 'Define Clusters by' and the DV into the 'Category Axis' for Clustered Bar Charts. If your IV is not in the key, you need to redo your chart)
- c. Make sure that you have '% of cases' rather than count for full points.

5. Paragraph (6/25 points):

- a)** You need to make a decision about the null hypothesis, i.e. value of the statistic, degrees of freedom, statistical significance. You must refer to the statistics to justify your decision.
- b)** You need to talk about the strength of the relationship and support this with statistics.
- c)** You need to talk about hypothesis, i.e. evaluation of directional relationship (form). (Hint: remember that only ordinal by ordinal relationships can be described as positive or negative for this assignment since they are the only categorical data that has a specific rank. You need to have clear statement of the direction for all of your analyses by referring to specific categories).
- d)** Remember, we are not grading you on whether or not your theory or hypothesis were accurate. We are grading if you can correctly interpret if the data supports or your hypothesis or not.
- e)** Never say that you have proven something. Just identify if the data supports your theory/hypothesis.