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**Note to the Instructor:** The data set used in this exercise is Field\_2013\_subset\_for\_classes\_GUN\_CONTROL.sav which is a subset of a Field Poll conducted in February, 2013.  Some of the variables in this Field Poll have been recoded to make them easier to use and some new variables have been created.  The data have been weighted according to instructions from the Field Research Corporation.  This exercise uses FREQUENCIES to get frequency distributions and CROSSTABS to explore relationships between variables.  In CROSSTABS students are asked to use percentages.  Chi Square and measures of association will be considered in a later exercise.  A good reference on using SPSS is SPSS for Windows Version 23.0 A Basic Tutorial by Linda Fiddler, John Korey, Edward Nelson (Editor), and Elizabeth Nelson.  The online version of the book is on [the Social Science Research and Instructional Center's website.](http://ssric.org/node/582)  You have permission to use this exercise and to revise it to fit your needs.  Please send a copy of any revision to the author. Included with this exercise (as separate files) are more detailed notes to the instructors, the SPSS syntax necessary to carry out the exercise (SPSS syntax file), and the SPSS output for the exercise (SPSS output file). These, of course, will need to be removed as you prepare the exercise for your students.  Please contact the author for additional information.

I’m attaching the following files.

* [**Data subset which is a SPSS data file**](http://ssric.org/files/field_2013_subset_for_classes_GUN_CONTROL.sav) (.sav format).
* [**Extended notes for instructors**](http://ssric.org/files/Extended_Notes_for_GUN_CONTROL1g.docx). MS Word (.docx) format.
* [**SPSS syntax file**](http://ssric.org/files/SPSS_Syntax_for_GUN_CONTROL1G.sps) (.sps format).
* [**SPSS output file**](http://ssric.org/files/SPSS_Output_for_GUN_CONTROL1G.spv) (.spv format).
* [**This page**](http://ssric.org/files/GUN_CONTROL.docx) in MS Word (.docx) format.

## Goal of Exercise

The goal of this exercise is to explore the relationship between sex and opinion on gun control.  The exercise also gives you practice in using several SPSS commands –FREQUENCIES and CROSSTABS.

### Part I—Frequency Distributions for Gun Control and Sex

We’re going to use a Field Poll conducted in 2013 for this exercise.  The Field Poll is a statewide poll of registered voters in California conducted by the Field Research Corporation.  For this exercise we’re going to use a subset of this Field Poll. Your instructor will tell you how to access this data set which is called Field\_2013\_subset\_for\_classes\_GUN\_CONTROL.sav.

Social research has shown that sex makes a difference in many areas of life.  Women are more likely than men to vote for the Democratic candidate for president.  Women are more religious than men.  Women earn less than men for comparable work.  But there aren’t always gender differences.  For example, men and women differ very little in their opinions about abortion.  In this exercise, we’re going to focus on gun control and see if there are differences between men and women in terms of how they feel about this issue.

Concepts are abstract ideas which need to be measured before they can be used in research.  In this exercise were going to use two concepts – opinion on gun control and sex.  We’ll use the following variables as measures of these concepts:

* G1\_q13 -- “What do you think is more important – to protect the right of Americans to own guns, or to impose greater controls on gun ownership?”
* D\_SEX\_q110

Run FREQUENCIES in SPSS to get the frequency distribution for both these variables.  (See Chapter 4, FREQUENCIES, in the online SPSS book mentioned on page 1 of this exercise.)

There are five columns in the output that SPSS gives you.

* The first column is the value label for the response category.
* The second column is the number of cases or frequency for each response.
* The third column is the percent.  The denominator for the percent is the total number of cases in the sample (834).
* The fourth column is the valid percent.  Here the denominator is the number of valid cases.  This is the total number of respondents minus the number of cases with missing data.
* The fifth column is the cumulative percent.  We’ll talk about these percents in exercise GUN\_CONTROL2G.

The percents and valid percents are identical for these variables. That’s because there are **no** cases with missing data for these two variables. Therefore, the percent and valid percent columns are identical. When there are cases with missing information, these percents will not be identical.  The more missing cases there are, the more likely it is that these two percents will be different.   We’ll talk more about missing data in GUN\_CONTROL2G.  For now, let’s not worry about them.

Let’s make sure you know how to interpret the output that SPSS gives you for G1\_q13 and D\_SEX\_q110.   Answer the following questions:

* How many respondents were male?  female?
* What percents were male?  female?
* How many respondents thought the right to own guns was more important?
* What percent thought the right to own guns was more important?
* How many respondents thought that controlling gun ownership was more important?
* What percent thought that controlling gun ownership was more important?

### Part II – Relationship between Respondents’ Sex and Opinion on Gun Control

Now we want to explore the relationship between respondents’ sex and how they feel about gun control.  To do this we’re going to run CROSSTABS in SPSS to produce a crosstabulation of our two measures – D\_SEX\_q110 and G1\_q13.  (See Chapter 5, CROSSTABS, in the online SPSS book.)  Note that the frequency distributions that you ran in Part I tell you nothing about the relationship between these two variables.

It’s important to distinguish between our dependent variable and our independent variable.  The dependent variable is what you are trying to explain and the independent variable is the variable that you think will help you explain the variation in your dependent variable. We want to explain why some people favor increased controls on guns and why others oppose it.  We think that sex will help us answer this question.  In other words, it will help explain the variation in people’s opinion about gun control.  More specifically, our hypothesis is that women will be more in favor of increased gun control while men will be more opposed to gun control.  A hypothesis specifies the relationship you expect to find between two variables.

When you run the crosstab for your two variables, put the independent variable in the column and the dependent variable in the row of your table.  If you do this, you will always want to tell SPSS to compute the column percents.  Remember that you want to compare the percents straight across, not down or on the diagonal.

Write a paragraph describing the relationship between respondents’ sex and their opinion on gun control.  Were women more or less likely than men to favor gun control? Use the percents to help you describe this relationship.

## Part III – Argument or Theory

We started with the hypothesis that women will be more in favor of increased gun control than men.  Recall that a hypothesis specifies the relationship that you expect to find between two variables.  But why do we think our hypothesis will be true?  We need to have a logical, well thought out rationale for our hypothesis.  This is often called an argument or a theory.  We’ll call it an argument for the purposes of this exercise. For example, in this example, our argument might go something like this.

Women are more concerned than men with violence and the effects of violence on others.  This is because women bear children and women have the primary responsibility for rearing children.  This means that women are more concerned than men with the effects of violence on their children and the children of others.  Therefore, women will be more in favor of increased gun control than men.

Notice that the conclusion to our argument is the hypothesis.  We can test our argument by testing the hypothesis.  If the hypothesis is false, then we would reject our argument.[[1]](%22%20%5Cl%20%22_edn1%22%20%5Co%20%22)  If the hypothesis is true, then our argument is more credible.  We couldn’t conclude that the argument was true since that would be committing the “fallacy of affirming the consequent.”[[2]](%22%20%5Cl%20%22_edn2%22%20%5Co%20%22)  But we could conclude that it is more credible or more believable than it was before you confirmed the hypothesis.

Are there other similar hypotheses that you could derive from this argument?  Look at the variables in the Field data set that start with G2 through G10.  State your hypothesis.  It should be clearly stated and relatively brief (i.e., not more than two sentences).  Then test your hypothesis by running a crosstabulation of the two variables.  Write a short paragraph interpreting the crosstab using the percents.  Be sure to indicate whether the results support your hypothesis.

[[1]](%22%20%5Cl%20%22_ednref1%22%20%5Co%20%22) If you have discussed valid and invalid argument forms this is called “Modus Tollens.”  You could Google “Modus Tollens” to see more examples of this valid argument form.

[[2]](%22%20%5Cl%20%22_ednref2%22%20%5Co%20%22) This is an invalid argument form.