**ABORTION2A: Exercise Using SPSS to Explore Relationships Among Variables**

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**Note to the Instructor:** The data set used in this exercise is gss14\_subset\_for\_classes\_ABORTION.sav which is a subset of the 2014 General Social Survey. Some of the variables in the GSS have been recoded to make them easier to use and some new variables have been created.  The data have been weighted according to the instructions from the National Opinion Research Center.  This exercise uses RECODE  in SPSS to combine categories of variables, FREQUENCIES to see how respondents answered the abortion questions and CROSSTABS to explore relationships between and among variables.  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). Please contact the author for additional information.

I’m attaching the following files.

* [**Data subset**](http://ssric.org/files/gss14_subset_for_classes_ABORTION.sav) (.sav format).
* [**Extended notes for instructors**](http://ssric.org/files/Extended_Notes_for_Instructors_for_ABORTION2A.docx) (MS Word;.docx format).
* [**SPSS syntax file**](http://ssric.org/files/SPSS_Syntax_for_ABORTION2A.sps) (.sps format).
* [**SPSS output file**](http://ssric.org/files/SPSS_Output_for_ABORTION2A.spv) (.spv format).
* [**This page**](http://ssric.org/files/ABORTION2A.docx) (MS Word;.docx format).

**Goals of Exercise**

The goal of this exercise is to explore the relationship between religion and politics on the one hand and attitudes about abortion on the other hand.  We’ll look at the relationship between religion and abortion first and then look at the relationship between politics and abortion.  Finally we’ll explore the relationship of both religion and politics on attitudes toward abortion. The exercise also gives you practice in using several SPSS commands – RECODE to combine categories of variables, FREQUENCIES to see how people answered the questions, and CROSSTABS to explore relationships between and among variables.

**Part I—Religion and Abortion**

We’re going to use the General Social Survey (GSS) for this exercise.  The GSS is a national probability sample of adults in the United States conducted by the National Opinion Research Center.  The GSS started in 1972 and has been an annual or biannual survey ever since.  For this exercise we’re going to use a subset of the 2014 GSS. Your instructor will tell you how to access this data set which is called gss14\_subset\_for\_classes\_ABORTION.sav.

The GSS has a series of seven variables that we can use to measure how respondents feel about abortion.  All seven questions start with “please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if …” There are seven scenarios presented.  The variable name in the data set is in parentheses.

* “If the woman wants it for any reason?” (a1\_abany)
* “If there is a strong chance of serious defect in the baby?” (a2\_abdefect)
* “If the woman's own health is seriously endangered by the pregnancy?” (a3\_abhlth)
* “If she is married and does not want any more children?” (a4\_abnomore)
* “If the family has a very low income and cannot afford any more children?” (a5\_abpoor)
* “If she is not married and does not want to marry the man?” (a6\_absingle)
* “If she became pregnant as a result of rape?” (a7\_abrape)

In the first exercise (ABORTION1A) we created a composite measure of attitudes toward abortion (ABORTION).  Let’s start by running FREQUENCIES in SPSS for the variable ABORTION.  (See Chapter 4, Frequencies in the online SPSS book cited on page 1 of this exercise.)

Now start by recoding this variable into a smaller number of categories.  The variable ABORTION has a range from seven to fourteen.  Low values indicate support for the legality of abortion while high values indicate opposition to abortion.  When you look at the frequency distribution you’ll notice that it’s heavily weighted toward the low end of the continuum.  In other words, many more people think that abortion ought to be legal in all seven scenarios (39.7%) than think that abortion should be illegal in all seven scenarios (9.0%).  We’re going to divide this variable into three categories.  At the low end we’ll keep the value 7 as a separate category since so many feel that abortion ought to always be legal.  At the upper end we’re going to combine 12, 13, and 14 into its own category.  Everything in the middle (8 through 11) will be another category.  So our recoding will look like this:

* 7 will be recoded as 1 and given the value label of highest support,
* 8 through 11 will be recoded as 2 and given the value label of in-between, and
* 12 through 14 will be recoded as 3 and given the value label of lowest support.

When you use RECODE in SPSS, you can recode in two different ways—into the same variable or into different variables.  If you recode into the same variable, be careful.  It’s easier, but if you make a mistake, you will not be able to go back and recode it again.  You will have to close SPSS without saving the data set and then reopen the data set to get a fresh, clean copy of the data. So for this exercise recode into different variables.  You’ll have to give your recoded variable a new name.  Give your recoded variable the name ABORTION1.  (See Chapter 3, Recoding into Different Variables in the online SPSS book.)  To make your output more readable, add the value labels for this variable that we discussed above.

Run FREQUENCIES for both the unrecoded variable (ABORTION) and the recoded variable (ABORTION1).  Compare the two distributions to make sure you recoded correctly.  If you made a mistake, you’ll have to recode again.

Now that we have recoded the abortion variable we’re almost ready to begin exploring the relationship between religion and attitudes toward abortion.  We’re going to focus on religiosity which refers to how religious a person is.  There are a number of possible measures of religiosity in the GSS.  We’re going to look at two such measures.

* R6\_ATTEND refers to how often respondents go to church.  The question is “how often do you attend religious services?” and the response categories are never, less than once a year, once a year, several times a year, once a month, two to three times a month, nearly every week, every week, and more than once a week.
* R17\_RELPERSN refers to whether respondents consider themselves a religious person.  The question is “To what extent do you consider yourself a religious person?” The categories are very religious, moderately religious, slightly religious, and not religious.

We’re going to need to recode R6\_ATTEND to reduce the number of categories.  Let’s recode R6\_ATTEND and call the recoded variable R6\_ATTEND1.  Let’s combine every week (7) and more than once a week (8) into one category and give this category a value of 1.  Combine once a month (4), two to three times a month (5), and nearly every week (6) into another category and give this a value of 2.  Finally, combine never (0), less than once a year (1), once a year (2), and several times a year (3) into another category and give this a value of 3.  Now we have three categories--often (1), sometimes (2), and infrequently (3).  To make your output more readable, add value labels for this variable.  Make sure you recoded correctly by running FREQUENCIES for both the unrecoded variable (R5\_ATTEND) and the recoded variable (R6\_ATTEND1).  If you made a mistake, you’ll need to redo the recoding.

Before we look at the relationship between religiosity and attitudes toward abortion, we need to talk about independent and dependent variables.  The dependent variable is whatever you are trying to explain.  In our case, that would be how people feel about abortion.  The independent variable is some variable that you think might help you explain why some people think abortion should be legal and others think it shouldn’t be legal.  In our case, that would be our two measures of religiosity.  Normally we put the dependent variable in the row and the independent variable in the column.

Run CROSSTABS to produce two tables.  (See Chapter 5, Crosstabs in the online SPSS book.)  One will be for the relationship between R6\_ATTEND1 and ABORTION1.  The other will be for R17\_RELPERSN and ABORTION1.  Be sure to get the correct percents, Chi Square, and an appropriate measure of association.

What does the table tell you about these two relationships?  Use the percents, Chi Square, and the measure of association to help you interpret the tables.  Write one or two paragraphs describing these relationships.

**Part II—Politics and Attitudes toward Abortion**

Now we’re almost ready to begin exploring the relationship between politics and attitudes toward abortion.  We’re going to focus on the political party with which respondents identify and their political views (i.e., liberal, middle-of-the-road, conservative).

* P1\_PARTYID refers to which political party the respondent identifies with.  The question is “Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?”  The categories are strong Democrat, not strong Democrat, Independent near Democrat, Independent, Independent near Republican, not strong Republican, strong Republican, and other party.
* P4\_POLVIEWS refers to the respondent’s political views (i.e., liberal, moderate, or conservative).  The question is “We hear a lot of talk these days about liberals and conservatives. I'm going to show you a seven-point scale on which the political views that people might hold are arranged from extremely liberal--point 1--to extremely conservative-- point 7. Where would you place yourself on this scale?”  The categories are extremely liberal, liberal, slightly liberal, moderate, slightly conservative, conservative, and extremely conservative.

We’re going to need to recode both of these variables to reduce the number of categories.  We’ll start with P1\_PARTYID.  Let’s recode strong Democrat (0) and not strong Democrat (1) and give it a value of 1 which will have the value label Democrat.  Recode Independent near Democrat (2), Independent (3), and Independent near Republican (4) and give it a value of 2 which will have the label Independent.  And we’ll recode not strong Republican (5) and strong Republican (6) and give it a value of 3 which will refer to Republicans.  But what are we going to do with those who belong to another party (7).  You’ll notice that this has already been defined as a missing value so it won’t show up in your frequency distribution.  Call this variable P1\_PARTYID1.  Be sure to assign value labels to make your output more readable.  Run FREQUENCIES for the unrecoded and the recoded variable to make sure you didn’t make a mistake.

Not let’s recode P4\_POLVIEWS.  Combine extremely liberal (1), liberal (2) and slightly liberal (3) into one category and give it a value of 1.  This will refer to those who are liberal.  Recode moderate (4) and give it a value of 2.  This refers to moderate.  Then combine slightly conservative (5), conservative (6) and extremely conservative (7) into a third category and give it a value of 3.  This will refer to conservatives.  Call this variable P4\_POLVIEWS1.  Be sure to assign value labels.  Run FREQUENCIES for the unrecoded and the recoded variable to make sure you didn’t make a mistake.

Now we’re ready to explore the relationship between politics and attitudes toward abortion.  Run CROSSTABS to produce two tables.  One will be for the relationship between P1\_PARTYID1 and ABORTION1.  The other will be for P4\_POLVIEWS1 and ABORTION1.  Be sure to get the correct percents, Chi Square, and an appropriate measure of association.

What does the table tell you about these two relationships?  Use the percents, Chi Square, and the measure of association to help you interpret the tables.  Write one or two paragraphs describing these relationships.

**Part III—Religion, Politics, and Attitudes toward Abortion**

We know that religion and politics are related to each other.  To see that for yourself, run the crosstabulation of R17\_RELPERSN and P4\_POLVIEWS1.  Put political views in the column and whether respondents consider themselves religious in the row.  Get the column percents, Chi Square, and an appropriate measure of association.  You’ll see that conservatives are more likely to see themselves as very religious and liberals more likely to be not religious.

What we want to find out is whether each of these variables (i.e., religiosity and political views) has a relationship with attitudes toward abortion when the other variable is controlled (or held constant).  In other words, do we still see a relationship between religiosity and abortion when we have controlled for politics and do we still see a relationship between politics and abortion when we have controlled for religiosity?

We can find that out by running a three-variable crosstabulation.  Run the table with P4\_POLVIEWS1 in the column, ABORTION1 in the row, and R17\_RELPERSN as the control variable.  Use the percents, Chi Square, and an appropriate measure of association to decide whether political views still has a relationship with attitudes toward abortion after controlling for religiosity.

Now run the table with R17\_RELPERSN in the column, ABORTION1 in the row, and P4\_POLVIEWS1 as the control variable.  Use the percents, Chi Square, and an appropriate measure of association to decide whether religiosity still has a relationship with attitudes toward abortion after controlling for political views.

**Part IV—Conclusions**

What have you learned about the relationship between religion and attitudes toward abortion and the relationship between politics and abortion?  What have you learned about the joint relationship among all three variables?  Try to summarize your findings in several clearly-written paragraphs.