

## The Death Penalty - Exercise 1

### LEARNING OBJECTIVES:

#### *Skill*

- Using software to access and analyze census data
- Identifying independent and dependent variables
- Learning how to construct, read, and interpret bivariate tables displaying frequencies and percentages

#### *Substance*

- Use quantitative reasoning and analysis to predict which variables affect attitudes toward the death penalty. Students will learn to read graphs and use data online data manipulation tools.

Everything you need to complete this exercise is available on the web via your university or home personal computer.

1. The first thing you will do is visit the website <http://www.webuse.umd.edu/>.
2. When the Webuse page comes up, under the heading General Social Survey, click on "2000." This is the year 2000 data of the General Social Survey.
3. On the next screen, under the heading "Select an action," you should click on the circle to the left of "Browse codebook in this window," then click on the "start" button located a little further down.
4. You will now see the screen split into two parts or frames. In the left-hand frame, click on "standard variable list." The variable names and labels used in the 2000 General Social Survey now appear in the right-hand frame. The variables are grouped into categories, for example, the very first group is Case Identification, the second is Personal and Family Information, and so forth. Some of the categories are further broken down into subcategories. Take, for example, the Personal and Family Information category. As you go down the list you will see the subcategories of Respondent's Employment, Marital Status, Spouse's Employment, and so forth.
5. Let us take a closer look at the subcategory Marital Status. Notice that here there are four variables (marital, agewed, divorce, and widowed) listed along with corresponding labels. The variable names are on the left, and the label (which is a brief description of the variable) is on the right.
6. When you click on a variable name you can see the question that was asked in the survey that generated the data connected with that variable. For example, click on the variable "marital." This is what you should see:

Text of this Question or Item				
Are you currently--married, widowed, divorced, separated, or have you never been married?				
% Valid	% All	N	Value	Label
45.4	45.4	1,278	1	MARRIED
9.7	9.7	273	2	WIDOWED
15.7	15.7	441	3	DIVORCED
4.0	4.0	112	4	SEPARATED
25.3	25.3	712	5	NEVER MARRIED
	0.0	1	9	NA
<b>100.0</b>	<b>100.0</b>	<b>2,817</b>		<b>Total</b>
Properties				
<b>Data type:</b> numeric				
<b>Missing-data code:</b> 9				
<b>Record/column:</b> 1/25				

Now you are able to see the question that was asked which generated the variable “marital.” Remember, variables take on values. For example, the concept or variable “sex” takes on the values “male” and “female.” Likewise, in this example the variable “marital” takes on the values 1, 2, 3, 4, 5, and 9. These values have associated labels, for example, 1 is “married,” 2 is “widowed,” and so forth. The left-hand side of the table shows the percentage of persons who responded in the various categories. For example, when asked the question “Are you currently—married, widowed, divorced, separated, or have you never been married?”, 45.4% of persons responded that they were “married,” 9.7% responded “widowed,” 15.7% responded “divorced,” and so forth.

In this and following exercises, the major dependent variable is attitudes toward the death penalty. Go to the codebook and locate this variable. You should be able to provide the following information:

- Variable name
- Variable label
- The question that appeared in the General Social Survey corresponding to the variable
- A description of the categories of response to the question; and
- The percentages of respondents corresponding with each value or response category (Note: Always use the “%Valid” column rather than the “%All” column.)

## The Death Penalty - Exercise 2

In this exercise, you will start thinking about potential independent variables that might be related to our major dependent variable, namely, attitudes toward the death penalty (cappun). You will also come up with some tentative hypotheses regarding the nature of the relationship between support for the death penalty and various sociological factors. As in the first exercise, everything you will need to complete Exercise 2 is available on the web via your personal computer. If you need a refresher, go back to Exercise 1 to review instructions on how to get to the codebook for the 2000 General Social Survey.

Based upon our readings, class discussion, and the broader sociological literature, we know that certain social and demographic factors are often related to persons' attitudes and social behavior. Think about the things that affect or may be related to a person's attitude toward the death penalty. For right now, let us assume these factors are independent variables, that is, that they occur in time before the dependent variable and contribute to the production of it. So we are looking for things that might plausibly contribute to one's attitudes concerning the death penalty.

You are to find **five** variables in the codebook that you think are significantly related to our dependent variable. You should choose no more than one variable from any subcategory. For example, if you think marital status is related to one's attitudes toward the death penalty, you should choose only one variable from this category. That is, you would choose one of the four variables (either marital, aged, divorce, or widowed) from this category. (This is merely provided as an example. I am *not* suggesting that marital status is or is not necessarily related to attitudes toward the death penalty.)

List your five variables, and for each include a brief discussion of your rationale for including the variable. In addition, you should offer a tentative hypothesis as to the nature of the relationship between attitudes toward the death penalty and your chosen independent variable. Hypotheses are often stated in the form "As x changes (increases or decreases), y changes (increases or decreases)." Taking the example of marital status, one might state the following hypothesis:

Single persons are more likely to favor the death penalty than married persons.

(Again, the use of this example in no way implies that the hypothesis is "true," or that a relationship even exists between marital status and attitudes toward the death penalty.)

Your write-up should 1-3 pages. It is up to you to provide a compelling rationale for including the variables you have chosen and stating your hypotheses. You will be graded on the quality and logical coherence of your argument, as well as your ability to meet a minimum threshold with regard to actually choosing the "right" variable or variables. Or, probably better stated, your ability to not choose obviously "wrong" or unrelated variables.

### The Death Penalty - Exercise 3

In this exercise, you will be examining the extent to which various independent variables are actually related to attitudes toward the death penalty (cappun). First of all, however, we will need to cover some issues regarding **recoding** of data.

When a variable takes on many values, it is sometimes awkward to use it as it stands for purposes of descriptive and inferential statistics. In these cases, it is often preferable to recode variables, and this usually involves collapsing the many categories into a smaller number. As an example, one such variable is total family income (variable name: income98). This is how the variable looks:

<b>Income98 TOTAL FAMILY INCOME</b>				
<b>Text of this Question or Item</b>				
48. Family income on the 1998 survey. For question wording, see Q.37.				
<b>% Valid</b>	<b>% All</b>	<b>N</b>	<b>Value</b>	<b>Label</b>
1.1	1.1	30	<b>1</b>	UNDER \$1 000
1.2	1.1	32	<b>2</b>	\$1 000 TO 2 999
0.9	0.9	25	<b>3</b>	\$3 000 TO 3 999
0.7	0.7	20	<b>4</b>	\$4 000 TO 4 999
1.1	1.0	29	<b>5</b>	\$5 000 TO 5 999
1.3	1.2	35	<b>6</b>	\$6 000 TO 6 999
1.4	1.3	38	<b>7</b>	\$7 000 TO 7 999
2.8	2.6	74	<b>8</b>	\$8 000 TO 9 999
3.8	3.7	103	<b>9</b>	\$10000 TO 12499
3.9	3.7	104	<b>10</b>	\$12500 TO 14999
4.0	3.8	108	<b>11</b>	\$15000 TO 17499
3.5	3.3	94	<b>12</b>	\$17500 TO 19999
3.1	3.0	84	<b>13</b>	\$20000 TO 22499
4.3	4.1	116	<b>14</b>	\$22500 TO 24999
5.8	5.5	156	<b>15</b>	\$25000 TO 29999
6.7	6.4	179	<b>16</b>	\$30000 TO 34999
6.2	5.9	167	<b>17</b>	\$35000 TO 39999
8.2	7.8	221	<b>18</b>	\$40000 TO 49999
8.3	7.9	222	<b>19</b>	\$50000 TO 59999
8.0	7.7	216	<b>20</b>	\$60000 TO 74999
5.2	4.9	139	<b>21</b>	\$75000 TO \$89999
3.4	3.2	90	<b>22</b>	\$90000 - \$109999
6.5	6.2	174	<b>23</b>	\$110000 OR OVER
8.5	8.1	229	<b>24</b>	REFUSED
	3.8	107	<b>98</b>	DK
	0.9	25	<b>99</b>	NA
<b>100.0</b>	<b>100.0</b>	<b>2,817</b>		<b>Total</b>

Properties	
<b>Data type:</b>	numeric
<b>Missing-data codes:</b>	0,98,99
<b>Record/columns:</b>	1/108-109

As you can see, this variable takes on twenty three different values, making it unwieldy to work with when relating it to other variables and producing cross-tabulations. To correct this problem, a good strategy is to collapse or reduce the number of values the variable takes on, and this can be accomplished through recoding.

In order to recode, you will need to return to the 2000 General Social Survey (see instructions in Exercise 1). When you get to the Webuse Data Archive, instead of clicking on the circle to the left of “Browse codebook in this window,” you should click on the circle next to “Frequencies or crosstabulation” (one line down), then click the “start” button.

The frequencies and crosstab functions allow you to examine how one variable affects or is related to another. According to convention, the **dependent variable** always goes in the **row** box, while the **independent variable** goes in the **column** box. (In the “percentaging” line the “column” box should have a checkmark in it. If not, click it on. Down a little lower, under the “Other options” heading, go ahead and make sure a checkmark is placed in the “Color Coding” box.)

Now we are ready to examine how various independent variables are related to our dependent variable of interest, cappun. As an example, let us see how income98 is related to cappun. In plain English, when we run these two variables together to create a cross-tabulation, we are saying or hypothesizing that there is relationship between one’s income (or family income) and one’s attitude toward the death penalty. Since we know that cappun is the dependent variable, we can say more specifically:

As a person’s family income changes, his attitudes toward capital punishment change.

Going back to the web page (SDA Tables Program), the variable cappun should be typed in the row box, and income98 should be typed in the column box. Remember, though, that income98 needs to be recoded. So in addition to typing income98 in the column box, you need to add information to tell the program to collapse the number of values or categories the variable takes on. Basically, common sense, guided by the scientific literature, will give you an idea of how to reduce the number of values. Look at the income98 variable again (above). Value 1 represents persons whose family income was under \$1000 for the year 1998, 2 represents those whose family income was between \$1000 and \$2999, and so forth. Since the family poverty line is around \$15,000, it seems to make sense for the first new category to include those persons who made between \$0 and \$14,999 during 1998. Notice that the value 10 consists of those persons who made between \$12,500 and \$14,999.

The recoding convention is to type the variable name immediately followed by (r: ). (For further clarification, see the instructions for recoding on the SDA Tables Program page.) The full recoding of income98 would be written as follows:

income98 (r: 1-10; 11-14; 15-16; 17-18; 19-23)

This needs to be written exactly as depicted above. For example, the parentheses, the colon after “r,” and the semicolons separating the new categories MUST be included or the program won’t recognize it as a recoding.

After you have typed cappun in the row box and income98 (r: 1-10; 11-14; 15-16; 17-18; 19-23) in the column box, you can hit the “Run the Table” button. After a few seconds, a new page will appear,

Variables						
Role	Name	Label			Range	MD
Row	<b>cappun</b>	FAVOR OR OPPOSE DEATH PENALTY FOR MURDER			1-2	0,8,9
Column	<b>income98(Recoded)</b>	TOTAL FAMILY INCOME			1-5	
Weight	<b>Weight</b>	WEIGHT			.5212-3.4995	

  

Frequency Distribution							
Cells contain: -Column percent -N of cases		income98					ROW TOTAL
		1 1-10	2 11-14	3 15-16	4 17-18	5 19-23	
<b>cappun</b>	1: FAVOR	59.4 210	68.0 231	70.2 213	75.8 272	73.9 668	70.5 1,595
	2: OPPOSE	40.6 144	32.0 109	29.8 90	24.2 87	26.1 236	29.5 666
	<b>COL TOTAL</b>	<b>100.0</b> 354	<b>100.0</b> 340	<b>100.0</b> 303	<b>100.0</b> 359	<b>100.0</b> 905	<b>100.0</b> 2,261
<b>Means</b>		1.41	1.32	1.30	1.24	1.26	1.29
<b>Std Devs</b>		.49	.47	.46	.43	.44	.46
<b>Unweighted N</b>		440	360	313	356	785	2,254

  

<b>Color coding:</b>	<-2.0	<-1.0	<0.0	>0.0	>1.0	>2.0	T
<b>N in each cell:</b>	Smaller than expected			Larger than expected			

Summary Statistics							
Eta* =	.12	Gamma =	-.16	Chisq(P) =	31.88	(p=	0.00)
R =	-.11	Tau-b =	-.09	Chisq(LR) =	30.92	(p=	0.00)
Somers' d* =	-.07	Tau-c =	-.10	Df =	4		
*Row variable treated as the dependent variable.							
<b>Recode for 'income98'</b>							
1 = 1-10; 2 = 11-14; 3 = 15-16; 4 = 17-18; 5 = 19-23							
Allocation of cases (unweighted)							
Valid cases			2,254				
Cases with invalid codes on row or column variable			563				
<i>Total cases</i>			<i>2,817</i>				

In this exercise you will be interpreting the nature of the relationship between some independent variables and our dependent variable, *cappun*, according to the following instructions. You are to run cross-tabs on the variables specified below. (You may or may not need to recode some variables; it is up to you to make this call.)

1. Use the **degree** variable to see if there is a relationship between support for the death penalty and respondent's highest degree attained. Interpret this relationship.
2. Use the **sex** variable in the same manner as above. Which sex is more likely to favor the death penalty? What are the percentages?
3. Use the **race** variable as above. Are there differences in support for the death penalty by respondent's race? What are the percentages?
4. Use the **polviews** variable as above. Interpret the findings.
5. Use the **world1** variable as above. To the best of your ability, interpret this relationship.