

SOCL 300: USING STATISTICS IN SOCIOLOGY COMPUTER ASSIGNMENT 2.

Please answer the following questions. You should type and double-space your answers. Your tables should be professionally done. Constitute them in such a way that they look like they are meant for publication. Remember to clearly label your tables.

Use **GSS98PFP_** data set found on my website to answer the following questions.

1. Split the GSS98PFP_ data file by SEX. Analyze the dispersion of HRS1 (Number of hours worked last week) for each of the two groups (Male and Female) –using mean, median, mode, variance, and standard deviation. Then answer these questions:
 - a) Present your information in a correctly formatted and clearly labeled table. For easy interpretation, present the information in one table (that is information on both Male and Female). (5 points)
 - b) Which group worked the most hours? How do you know? (10 points)
 - c) Which group is the most homogenous, why? (10 points)
 - d) Are either of the distributions, for males or females, normal (symmetrical) (remember normal distribution is when Mean=median=mode)? (10 points)
 - e) If not, in which direction are they skewed? How do you know? (15 points)

COMPUTER INSTRUCTIONS

SPLIT FILE is a technique for dividing a set of data into two groups according to the categories of one of its variables. Thus splitting the file by the variable Sex divides the data set into two groups: male and female.

Open up your GSS98PFP_ data on your CD into SPSS. At the SPSS data editor window, click on DATA ► SPLIT FILE. When Split File window opens, click on **Organize Output by Groups**. Then scroll down to the variable **SEX**. Click on it to highlight it, and then click on the ► pointing at the **Groups Based On** box to select it. Click **OK** to return to the SPSS Data Editor window. Notice that the **Split File On** message appears at the bottom right corner of the screen.

To calculate your mean, mode, median, variance, and standard deviation of HRS1 click ANALYZE ► DESCRIPTIVE STATISTICS ► FREQUENCIES. Highlight the variable HRS1 and click it into the **Variable** window. Click on **Statistics** located at the bottom of the Window and click on **Mean, Median, and Mode** under **Central Tendency** and Under **Dispersion** click on **Std. Deviation** and **Variance**. Click **Continue** and then Click **OK**.

Disregard the Frequency distribution output. Use the little table with the heading “Statistics” to answer this question. Under the Statistics table is shown whether the results pertain to Males or Females.

2. Test the research hypothesis that there is a relationship between financial satisfaction and happiness.

- a) What is the null hypothesis for this association. (10 points)
- b) Use SPSS to produce a contingency (cross tabulation) table with column percentages for the association between the variable SATFIN (satisfaction with one's financial situation) and HAPPY (General Happiness). Present this information in a correctly formatted and labeled table. You must determine which variable is the dependent and independent to help you with the table construction. (10 points)
- c) Describe the association between these two variables. Is the relationship positive or negative? How do you know? (10 points)
- d) Use Chi-square to assess the likelihood that a table showing this degree of statistical independence between the two variables could have been produced by chance. (20 points).

COMPUTER INSTRUCTIONS

Remember before proceeding with this section you should turn off the split file function by going back to **Data ► split file** then click on **Analyze all cases, do not create groups**. Once done click **OK**. Your data should be back together.

At the SPSS data editor window, open Crosstabs dialog box by following the command path **ANALYZE ► DESCRIPTIVE STATISTICS ► CROSSTABS**. At the Crosstabs window, select the variables for your contingency table (SATFIN and HAPPY). Make sure that the variable HAPPY is put in ROW and SATFIN is put in COLUMN. Click on CELLS, located at the bottom of the dialog box between STATISTICS and FORMAT. Look under percentages, and click on COLUMNS. Then click on Continue to go back to the Crosstabs dialog box. Click on STATISTICS to open the statistics window. Look for Chi-square in the upper left corner and click on it. Click continue to go back to the Crosstabs dialog box. Then Click on OK. You will get a contingency table for the variables SATFIN and HAPPY along with a set of Chi-square statistics. The Chi-square you learned to calculate by hand is the Pearson chi-square.

Note:

- a) **Hand in your computer printouts.**
- b) **Please make sure you edit your work before handing it in.**
- c) **No late assignments will be accepted.**

Let me know if you have any questions.