

**SW 8102 Advanced Research—Summer, 2004
Data Analysis Assignment**

Arrowhead County Social Services Department kept data on its child protection activities for the 2003 calendar year, entering information into their computer database on a number of relevant variables. Eighty-three cases of alleged child maltreatment were investigated during this year. Variables on which data are available include age of oldest child, number of siblings, age of mother (female guardian), race of child, sex of child, social worker’s rating of presence of resiliency factors, responding parent’s views on spanking as a form of discipline, responding parent’s ratings of the helpfulness of parenting literature provided, whether or not Intensive Family-Based Services were provided, whether or not neglect was substantiated, whether or not abuse was substantiated, length of out-of-home placement of the child(ren). A list and description of these variables appears below:

Variable (name)	Description
age of oldest child (agechild)	age in years at last birthday
number of siblings (numsibs)	number of siblings living in the household
age of mother or female guardian (agemoth)	age in years at last birthday
race of oldest child (racechld)	1 = white; 2 = American Indian; 3 = other
sex of oldest child (sexchild)	1 = female; 2 = male
social workers rating of presence of resiliency factors in family (swrating)	3 = significant resiliency factors; 2 = several resiliency factors; 1 = limited resiliency factors; 0 = no resiliency factors
responding parent’s views on spanking as a form of discipline (spank)	1 = strongly disagree; 2 = disagree; 3 = uncertain ; 4 = agree; 5 = strongly agree (assume interval level data)
responding parent’s views on of the helpfulness of parenting literature provided (lithelp)	1 = strongly disagree; 2 = disagree; 3 = uncertain ; 4 = agree; 5 = strongly agree (assume interval level data)
whether or not neglect was substantiated (neglect)	1 = yes; 2 = no
whether or not abuse was substantiated (abuse)	1 = yes; 2 = no
whether or not Intensive Family-Based Services were provided (ifbs)	1 = yes; 2 = no
whether or not children were placed out of the home (placeout)	1 = yes; 2 = no
length of out-of-home placement of the child(ren) (lengplac)	length of placement in days

The supervisory team in the child protection unit is interested in knowing a number of things about the activities of the unit during the 2003 calendar year. As the most recently hired member of the unit, you have been asked to analyze this data. The data is available in a file called spssCW03, which can be opened on either an IBM or Macintosh computer. The county has an SPSS license on both of these platforms as well. The team would like you to answer the following questions for them. Please write your responses to these questions in language that could be understood by someone who has forgotten most of the statistics they took five years ago. Please describe as well why you used the test that you did to this same audience. The member of the team who is most knowledgeable about statistics said they would be willing to make a Type I error 5% of the time (i.e., adopt a .05 level of significance where appropriate).

1. What was the typical age of the oldest child in families that were investigated? How much variation in the age was there among oldest children?
2. What was the typical response on the social workers rating of resiliency factors? How much variation was there in these ratings?
3. In what percentage of the cases were children placed out of the home? What was the average length of out-of-home placement for those who were placed?
4. Did providing Intensive Family-Based Services affect the average length of out-of-home placement for those who were placed? What is the probability that the difference that was observed occurred by chance?
5. Did the race of the oldest child affect the average length of out-of-home placement? What is the probability that the difference that was observed occurred by chance?
6. Was there a relationship between the responding parent's views on spanking and their views on the value of the literature provided to them? What does this relationship mean, if anything? How likely was it that this relationship could have occurred by chance?
7. Was the sex of the oldest child related to the likelihood that abuse was substantiated? How likely was it that this relationship could have occurred by chance?
8. Suppose you knew the age of the oldest child and wanted to predict the age of the mother (female guardian). What formula would best predict the mother's (guardian's) age? What would be the best estimate of the mother's age if the oldest child was 15?

Note on data file: The data file for this activity was sent as an attachment to an email message. To access this file, 1) sign in to Mulberry, 2) open the message on "data for stat assignment," 3) click on the triangle after "parts" so you can see the attachments, and 4) double click on spssCW03 and save this data on the C drive in "My Documents." You can also download the file from the SW8102 home page on the Internet.

Note on SPSS: SPSS can be accessed from Wintel computers in UMD's labs by going to the "Start" menu in the lower left hand corner of the screen and then selecting "Programs," "Specialized Academic Software," "Biology and Math Software," and "SPSS 11.0 for Windows" on successive menus. Once SPSS is open, you can open an existing data source (spssCW03.por) from "My Documents" (or wherever you saved it) after indicating "Files of type:" to be "SPSS portable (*.por)."

SPSS Guide for Use

If you want:	select this item from the Analyze menu*	and then do this before clicking “OK”
frequencies	Descriptive Statistics	select frequencies; then identify variable
percentages	Descriptive Statistics	select frequencies; then identify variable
mean	Descriptive Statistics	select frequencies; then identify variable; click on statistics; make sure there is a “√” in front of “mean”
median	Descriptive Statistics	select frequencies; then identify variable; click on statistics; make sure there is a “√” in front of “median”
mode	Descriptive Statistics	select frequencies; then identify variable; click on statistics; make sure there is a “√” in front of “mode”
standard deviation	Descriptive Statistics	select frequencies; then identify variable; click on statistics; make sure there is a “√” in front of “standard deviation”
range	Descriptive Statistics	select frequencies; then identify variable; click on statistics; make sure there is a “√” in front of “range”
a correlation	Correlate	select bivariate; identify relevant variables
a linear regression	Regression	select linear; identify dependent (criterion) and independent (predictor) variables
chi square	Descriptive Statistics	select crosstabs; identify row and column variables; click on statistics; make sure there is a “√” by “chi-square”
t-test	Compare means	select appropriate t-test; specify test (dependent) and grouping (independent) variables; define groups (two numbers)
ANOVA	Compare means	select one-way ANOVA; specify dependent and factor (independent) variables; define range (possible values) of factor variable if requested; click options and make sure there is an " √ " by descriptive.

**Note: The item in the Analyze (statistics) menu may be different based on the version of SPSS that you are using.*