Children in poverty

In this module, we will be looking at the percent of children in poverty and some of the factors related to child poverty. (You may have already done some of this in the "Aspects of social stratification" module. If so, you may copy **your** results into a new document file. This does **not** mean that you can copy someone else's results into your file.)

1. To begin, go to the Annie E. Casey Kids Count web site (www.kidscount.org), click on "2002 Kids Count Data Book Online" and look at how the percent of children in poverty varies across the states. To get this information, do the following: (1) Click on "Maps"; (2) Select "Percent of children in poverty" as the Indicator; (3) Follow the rest of the steps (use 1999 data).

   Looking at the map, how does Virginia compare to other states in terms of the percent of children in poverty?

2. Which state has the lowest percent of children in poverty, and what is the percent in that state? Which state has the highest percent of children in poverty, and what is the percent in that state? What is the percent of children in poverty in Virginia? What is the percent of children in poverty in the United States? (To get this information, do the following: (1) Click on "Rankings"; (2) Select "Percent of children in poverty" as the Indicator; (3) Follow the rest of the steps; (4) Use 1999 data; (5) Do not "Choose a region".

3. Next, look at the trend in the percent of children in poverty over the decade of the 1990s. For this part, we will not look at the trend for each of the 50 states. Instead, select Virginia, the two states you already identified as having the highest and lowest percent, and the United States as a whole. The steps to do this are as follows. (1) Click on "Line graphs"; (2) Click on the boxes for the United States, Virginia, and the two states you identified as having the highest and lowest percent of children in poverty; (3) Select "Percent of children in poverty" as the Indicator; (4) Follow the rest of the steps.

   Did these three states and the United States overall follow the same trend over the 1990s? How would you summarize the trends?

4. Next, let's get some idea of why states vary in the level of child poverty. What are some of the factors that might be related to child poverty? Many different factors might be related; the following is a short list of factors that might be related to variations in the level of child poverty: the overall economic situation in the state; the educational level of people living in the state; the prevalence of single-parent families in the state; and the racial and ethnic composition of the state.

To examine these factors, we will look at several scatter plots. A scatter plot is a simple graph that shows the relationship between two variables by showing a point for each case on a two-dimensional graph (in this situation, each case is a state or the District of Columbia). Looking at a scatter plot, we can get an idea about whether the two variables are related and, if so, how strong the relationship is.

To examine the scatter plot, we have to use the file "tool_us.xls" from the SSDAN KidsCount web site (www.ssdan.net/kidscount). If you have not already done so, go to that web site, click on "Data Resources and Analysis Tools" and download "tool_us.xls" (instructions for downloading are given on the web site, after you click "Data Resources and Analysis Tools"; downloading is straight forward).

Open the file "tool_us.xls" (click on "Enable Macros" – SSDAN is a reliable source) and click on "Chart". Then, make Median Income of Families with Children ("MedianIncomeFamW/Child") the X variable and make "Poverty" the Y variable. (Do this by clicking on the X variable box and Y variable box, respectively, and scrolling down to select the specified variable.) For both variables, select the most recent data available, which is1999. (Recall that half the families have an income above the median income and half have an income below the median.)

After you select the two variables and the years, "tool_us.xls" will automatically display a scatter plot showing the relationship between the two variables.

I would expect that those states that have a higher median family income will have fewer children living in poverty. Is this the case? (Please respond in a full sentence, not just "yes" or "no".)

One measure of the strength of the relationship between two variables is called a "correlation coefficient". The correlation coefficient can vary from –1.0 to 1.0. 1.0 means the two variables are perfectly related to each other in a positive direction; in other words, if one variable increases, the other one increases by a corresponding amount. –1.0 also means the two variables are perfectly related to each other, but in a negative direction; if one variable increases, the other one decreases by a corresponding amount. 0.0 means that the two variables are not related; a change is one variable is not predictably related to a change in the other variable. In practice, correlations are usually not close to 1.0 or –1.0. A correlation of .2 is usually considered a weak relationship; a correlation of .6 is strong; a correlation of .8 is extremely strong.

"tool_us.xls" automatically reports the correlation between the two variables in the scatter plot. What is the correlation between median family income and child poverty?

Are there any "outliers"? "Outliers" are points that are not close to the other points. If there are outliers, what areas are outliers? (You can find out by putting the cursor on top of a point. After a second, the name of the geographic area will appear, as well as the X and Y value for that area.) What are the values of the two variables for the outliers?

5. Next, let's look at the percent of families with children headed by a single parent. Go to the Annie E. Casey Kids Count web site (www.kidscount.org), click on "2002 Kids Count Data Book Online" and look at how "Percent of families with children headed by a single parent" varies across the states. To do this, follow these steps: (1) Click on "Maps"; (2) Select "Percent of families with children headed by a single parent" as the Indicator; (3) Follow the rest of the steps (use 1999 data).

   Looking at the map, how does Virginia compare to other states in terms of the percent of families with children headed by a single parent?

   Next, let's see how child poverty is related to the percent of single parents. Would you expect the child poverty rate to be related to the percent of families that are single parent families? If so how? Please write a full sentence clarifying your expectations.

   To examine the relationship, we use the "tool_us.xls" file from the SSDAN Kids Count web site (www.ssdan.net/kidscount). Make "Poverty" the Y variable and make "Percent of families with Children headed by a single parent" ("SingleParent") the X variable. Is the pattern shown in the scatter plot generally consistent with or inconsistent with your expectation, as you expressed it above? (Please write a full sentence.)

   What is the correlation between child poverty and the percent of families that are single parent families?

   Are there any "outliers"? If there are outliers, what areas are outliers? What are the values of the two variables for the outliers?

6. Next, let's look at the percent of the under 18 population that is Black. Would you expect the child poverty rate to be related to the percent of under18 population that is Black? If so, how? Please write a full sentence clarifying your expectations.

   To examine the relationship, we use the "tool_us.xls" file from the SSDAN Kids Count web site (www.ssdan.net/kidscount). Make "Poverty" the Y

variable and make “Percent of the under 18 population that is Black” (“BlackAlone”) the X variable. (You need to set the year to “2000” for BlackAlone.) Is the pattern shown in the scatter plot generally consistent with or inconsistent with your expectation, as you expressed it above? (Please write a full sentence.)

What is the correlation between child poverty and the percent of the under 18 population that is Black?

Are there any “outliers”? If there are outliers, what areas are outliers? What are the values of the two variables for the outliers?

7. Median family income, single parents, and Black are **independent** variables that may affect poverty, the **dependent** variable. Do you expect that these three independent variables are related to each other? Given these three independent variables, there are three pairs of independent variables. Write your expectations about the relationship between each of these three pairs of independent variables. Specifically, for each pair, do you expect they are positively related, negatively related, or unrelated? (You are not required to create the scatter plot or the correlation coefficient.)