Data Analysis Project

This module provides an opportunity to gain hands-on experience in data analysis. Child and family data from sources including the U.S. Census Bureau, U.S. Department of Education, and NC Department of Public Instruction will be examined and described using descriptive statistics. Groups will be assigned different questions to explore using the data sets. Findings will be presented in a formal presentation in which education majors, faculty, friends, and students may be invited. Inferences will be made about how the data impacts the performance of children and family relationships.

No technology is needed other than Office 365 apps.

Instructions:

Fifteen data sets are provided for this assignment. Some data are in Excel spreadsheets and other data may be viewed by clicking the links to the websites. Review the data to learn about child and family characteristics in the United States, the state of North Carolina, and specifically in Guilford and Forsyth counties. Specific questions will be assigned to each group. Follow the steps below to complete the presentation.

1. Read the questions assigned to your group.

2. Determine which data sets are related to the assigned questions.

3. Use the data to answer your questions.

4. Develop a presentation that addresses each assigned question.

- Include title slide.
- Address each question separately.
- Identify the data sets used to answer each question.
- Make a table or graph to represent the data.
- Provide an explanation of what the data means and how it applies to the question.
- Explain why it is important to analyze data in your selected field (education, social work, psychology, etc.)
- Based on your knowledge of children and families, share how you think the school performance and family relationships may be impacted by the variables you explored in the data.

Groups 1, 3, and 5 will address question 1 and 3 and the two questions assigned to all groups. Groups 2, 4, and 6 will address questions 2 and 4 and the two questions assigned to all groups.

Separate Group Questions:

1. Compare the percentage of 3 to 5 year old children enrolled in school in the states of North Carolina, South Carolina, Virginia, New Jersey, New York, and Vermont. Make a table or graph to represent the data.

   - Identify the percentage of children enrolled for each state.
   - Compare the percentage of children enrolled by race for each state.

2. Compare the percentage of 3 to 5 year old children enrolled in child programs in 2018 and 2019 based on the following family characteristics. Make a table or graph to represent the data.

   - Educational levels of parents
   - Employment status of parents
   - Poverty status of household

3. Analyze census data for the state of North Carolina to respond to the following questions. Make tables or graphs to represent the data.

   - What percentage of total males are in the age group for child care? (ages 0 -5)
   - What percentage of total females are in the age group for child care? (ages 0-5)
   - What percentage of total males are school-age students? (ages 5-19)
   - What percentage of total females are school-age students? (ages 5-19)
   - What percentage of total males are senior citizens? (ages 60 and older)
   - What percentage of total females are senior citizens? (ages 60 and older)

4. Describe the trends of households and families in NC.

   - What percentage of males and females have a disability in North Carolina?
   - Compare the percentage of individuals (include both males and females) with a disability based on race.
   - For individuals under 18, compare the percentage of individuals with a hearing difficulty, visual difficulty, cognitive difficulty, and ambulatory difficulty.

All Group Questions:

1. Review the school report cards for Guilford and WS/FCS schools. Describe the student performance by content area and race. Compare the performance of the two school systems in a table or graph.
2. What kinds of trends are present in the computer/internet data, educational attainment, income over 12 months, and language spoken at home when considering variables including race, gender, age?