

Problem Set #1
10 points
DUE DATE: Saturday following end of Module 2:

Goal: Students will use SPSS and Excel to generate descriptive statistics, create frequency distributions, and interpret these results using a set of data that was created to study the relationship between the use of anticonvulsants, size of a treatment center, and the number of convulsions a patient had. Students will calculate incidence and prevalence rates and compare rates between groups.

This is a two-part assignment. Part 1 includes Module 1 concepts. Part 2 includes Module 2 concepts.

Materials

1. SPSS software
2. Microsoft Excel
3. SPSS demonstration videos
4. Excel demonstration videos
5. SPSS datafile (anticonvulsants.sav)
6. Excel database (anticonvulsants.xlsx)

Part 1 Instructions:

1. 3 POINTS: Calculate descriptive statistics using SPSS and Excel using the following variable: **convulsions**. Calculate mean, median, mode, and standard deviation using Excel and SPSS. Also calculate the quartiles using SPSS (remember Analyze → Frequencies → Statistics. Copy and paste the appropriate tables from SPSS and Excel below. How do your results compare from each technique? Use the appropriate statistics to calculate a 5-point summary.

ANSWER BELOW:

2. 2 POINTS: Create a frequency table in SPSS and Excel using the following variable: **center_size**. Copy and paste the appropriate tables from SPSS and Excel below. How do your results compare from each technique?

ANSWER BELOW:

Part 2 Instructions:

3. 5 POINTS: The National Institute on Drug Abuse makes data available on prevalence and incidence of drug use in the United States. Trends in prevalence of drug use over time among 8th, 10th, and 12th graders is based on data available here: <https://www.drugabuse.gov/trends-statistics/monitoring-future/monitoring-future-study-trends-in-prevalence-various-drugs>.

Answer the following questions below:

- What do these data tell us about prevalence and incidence (consider what these concepts mean in your answer)?
- Compare the reported rates (using a ratio) of Marijuana use between 12th graders and 8th graders in 2019 and interpret what this number means.
- Compare the reported rates (using a ratio) of Marijuana use between 12th graders and 10th graders in 2019 and interpret what this number means.