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Submission Date: April 16, 2023

**20-Day Exercise Submission**

Complete the following using the assignment template. See the instructions below.

1. Define and give an example of each of the following keywords and phrases:

a. Acronym NOIR

b. Categorical data

c. Measures of central tendency

d. Interval data

e. Continuous data

2. Explain how descriptive statistics can make data understandable.

3. Structure (assignment evaluation includes the following structure below).

1. Download the “OGS APA Course Assignments Template 7th Ed 2021” template from the General Helps folder in the AA-101 The Gathering Place Course on DIAL. Using the template, create the following pages.
2. Title Page (Not included in page count).
3. Copy and paste the assignment instructions from the syllabus starting on a new page after the title page, adhering to APA 7th edition style (APA 7 Workshop, Formatting, and Style Guide, APA 7 Quick Guide).
4. Document all sources in APA style, 7th edition (APA 7 Reference Example, APA 7 Quick Guide).

e. Start the assignment on a new page after the copied assignment instructions.

f. Include a separate Works Cited page, formatted according to APA style, 7th edition.

4. Submit through **Dial** to the professor.

1. Define and give an example of each of the following keywords and phrases:

a. Acronym NOIR

b. Categorical data

c. Measures of central tendency

d. Interval data

e. Continuous data

1. The acronym NOIR represents the four levels of measurement used by researchers to classify their data: Nominal, Ordinal, Interval, and Ratio. These levels are in ranking order from lowest to highest.
2. Categorical data – is associated with qualitative data because the data is descriptive. It consists of categorical variables that represent characteristics of the data like gender, marital status, religion, race, ethnic group, etc. Sometimes it can take numerical values, but those numbers do not have mathematical meaning—for example, a person’s birthdate, place in a race, or postal address. Although the data contains numbers, it is still categorical because one cannot calculate the average. There are two types of categorical data, and they are nominal and ordinal. Nominal data use labels and ordinal data uses ranking. Categorical data are also mutually exclusive, meaning an item can only exist in one category or another. For example, you cannot be male or female or married and single (Terrell, 2012, p. 39).
3. Measures of central tendency – associated with descriptive statistics and used to represent the attributes of the data. There are three measures of central tendency, and they are the mean (M), the median (Mdn), and the mode (Md). When calculating them, they must be put in numerical order from least to greatest in value (*COM\_968-32\_PPTX\_Statistics Core 3-Dm\_03.04.23\_Spr*, n.d., p. 13).
   1. Mean – A measure of central tendency reflecting the average value in a dataset. They are only used with quantitative data (interval and ratio) (Terrell, 2012, p. 391). “For example, in a distribution of 10 test scores, 69 + 77+ 77+77+84+ 85+ 85+ 87+92+ 98/ 10 = 83.1. Since the mean is sensitive to extreme scores, it is the best measure for describing normal, unimodal distributions. However, the mean is not appropriate in describing a highly skewed distribution (*COM\_968-32\_PPTX\_Statistics Core 3-Dm\_03.04.23\_Spr*, n.d.).”
   2. Median – A measure of central tendency that describes the midpoint of data that are ordinal, interval, or ratio level and have been sorted into ascending or descending sequence (Terrell, 2012, p. 392). “For example, in our distribution of 10 test scores, 84.5 is the median. 69, 77, 77, 77, 84, 84.5 85, 85, 87, 92, 98 of the three measures of central tendency is the least affected by extreme values. So, it is helpful to describe a skewed distribution (*COM\_968-32\_PPTX\_Statistics Core 3-Dm\_03.04.23\_Spr*, n.d.).”
   3. Mode – A measure of central tendency reflecting the value that occurs most often in a dataset. It can be used with all types of data (Terrell, 2012, p. 392). “For example, in our distribution of 10 test scores, 77 is the mode because it is observed most frequently (*COM\_968-32\_PPTX\_Statistics Core 3-Dm\_03.04.23\_Spr*, n.d.).”

2. Explain how descriptive statistics can make data understandable.

Data is everywhere, and the purpose of statistics is to assist with the collection, analysis, interpretation, and presentation of the data. Depending on the type of data collected, it can be displayed in several ways. For example, one may use a histogram, bar graph, line graph, or pie chart. Even the form of display chosen is done to best show the attributes of the data. Therefore, social researchers describe the data to make sense of society. In doing so, descriptive statistics summarizes the characteristics of a data set. The data collection, however, represents a small sample of the population. For example, knowing that a student has done well in a particular class is helpful. However, knowing that the student is performing well in many of his classes is even more beneficial based on the student’s grade point average. (*COM\_968-32\_PPTX\_Statistics Core 3-Dm\_03.04.23\_Spr*, n.d.).

WORKS CITED

*COM\_968-32\_PPTX\_Statistics Core 3-dm\_03.04.23\_Spr*. (n.d.). Retrieved April 16, 2023, from https://docs.google.com/presentation/d/17q1WsjenlLinZ4AHF0HRpU02-j8CDyDwEGfBB3b6pX0

Terrell, S. R. (2012). *Statistics Translated: A Step-by-Step Guide to Analyzing and Interpreting Data* (1st edition). The Guilford Press.