This assignment has three parts, which will be submitted in one document.  
  
For this task, you will begin by calculating the mean, median, and mode for a fictitious data set. These data represent the results of a fictitious study which investigates whether a progressive muscle relaxation (PMR) technique is more effective than a biofeedback technique in the reduction of occupational stress. Employees were randomly assigned to the PMR or biofeedback group. All employees were screened to ensure they met the criteria for high levels of occupational stress. All employees received a one-hour training on either PMR or biofeedback. After one month of utilizing the stress management technique, employees completed a measure of occupational stress called the Occupational Stress Inventory (OSI). Note that higher scores on the OSI inventory reflect greater levels of occupational stress.

**Part 1:** For the first part of this assignment, create a table showing the mean, median, and mode for each stress management technique on the score for OSI. The data for each participant are contained in the “Participant Data” worksheet in the Week 2 Data file. You may use Excel or you can calculate these values by hand. Your table should look like the following:

|  |  |  |
| --- | --- | --- |
|  | **Progressive Muscle Relaxation (PMR)** | **Biofeedback** |
| Mean |  |  |
| Median |  |  |
| Mode |  |  |

You must have the “Data Analysis” add-in installed. Directions for this installation are provided in the “Data Analysis in Excel 2016” file located under your weekly resources. These instructions will also work for Excel 2010. This document also describes how to calculate basic descriptive statistics using Excel.

**Part 2:** The I/O practitioner conducting this research is also interested in whether the effects of these stress management techniques vary by sex, so male employees and female employees were recruited for the study. For the second part of this assignment, create a table showing the mean, median, mode, range, variance and standard deviation for each stress management condition and each sex on the score for the OSI. Use the data for each participant contained in the “Participant Data” worksheet in the Week 2 Data File. You may use Excel or you can calculate these values by hand. Your table should look like the following:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Female PMR** | **Female Biofeedback** | **Male PMR** | **Male Biofeedback** |
| Mean |  |  |  |  |
| Median |  |  |  |  |
| Mode |  |  |  |  |
| Range |  |  |  |  |
| Variance |  |  |  |  |
| Standard Deviation |  |  |  |  |

**Part 3:** For this part of the assignment, create a bar chart in Excel reflecting the means for each of the four groups identified in Part 2. Remember that your bar chart should show the means for each group rather than individual participant data, and so be sure to organize your data accordingly.  
  
For the steps regarding how to create the bar graph, review the steps in “Creating a Bar Graph in Excel 2016” or “Creating a Bar Graph in Excel 2010,” located under your weekly resources. These instructions should also work with other versions of Excel.  
  
You should copy and paste the graph you create into a Word document, along with your Part 1 and Part 2 tables. Include a brief 1-2 paragraph summary of your results.