MA 155

Project 1: Data Visualization

1. Construct a frequency distribution (make sure your table has both frequencies and percentages, round your percentages to the nearest whole number) for "REGION" in excel by following the steps below.

Table 1 shows the distribution of region of survey respondents by frequency and percentage. South recorded the largest percentage (45%), followed by North Central/Midwest (21%), West (18%), and Northeast (15%) in that order.

Table 1: Region of Survey Respondents by Frequency and Percentage

Region	Frequency	Percent
North Central/Midwest	325	21%
Northeast	233	15%
South	704	45%
West	286	18%
Total	**1548**	**100%**

2. Construct a frequency distribution (make sure your table has both frequencies and percentages, round your percentages to the nearest whole number) for "SEX " in excel by following the steps below.

Table 2 shows the distribution of sex of survey respondents by frequency and percentage. Of the 1548 respondents, 53% were females while 47% were males.

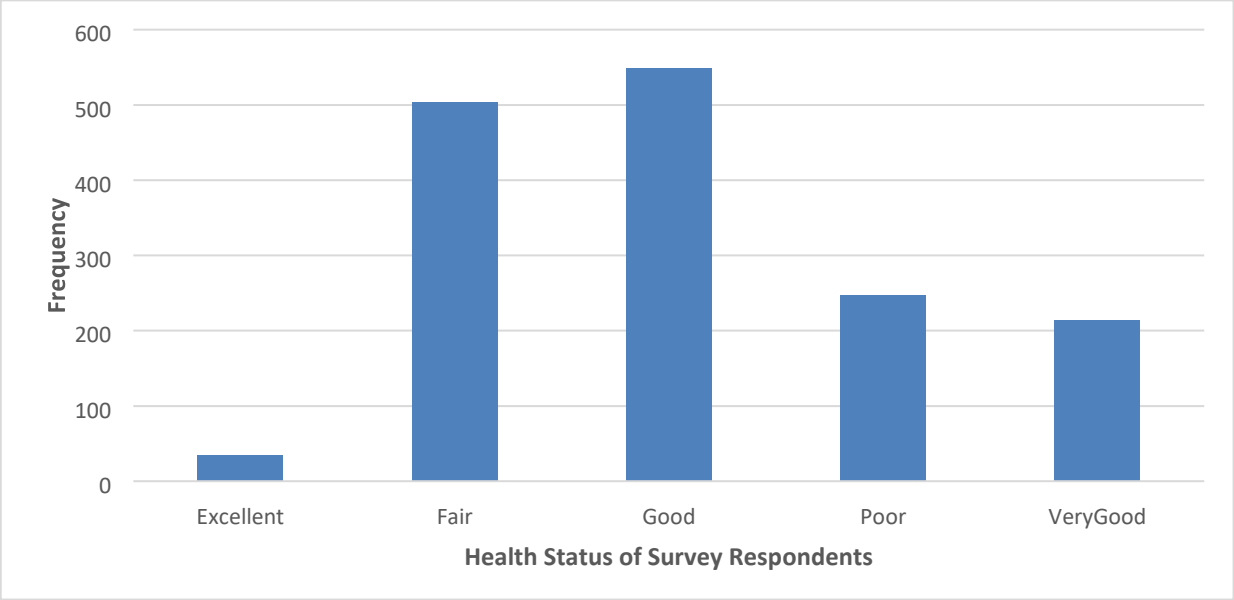
Table 2: Sex of Survey Respondents by Frequency and Percentage

Sex	Frequency	Percentage
Female	818	53%
Male	730	47%
Total	**1548**	**100%**

3. Construct a bar graph for “HEALTH” in excel by following the steps below. Make sure to give your graph a title and label the axes.

The bar graph below illustrates the health status of survey respondents in terms of frequency. Majority of the respondents had good and fair health status while only few respondents were in excellent health status category.

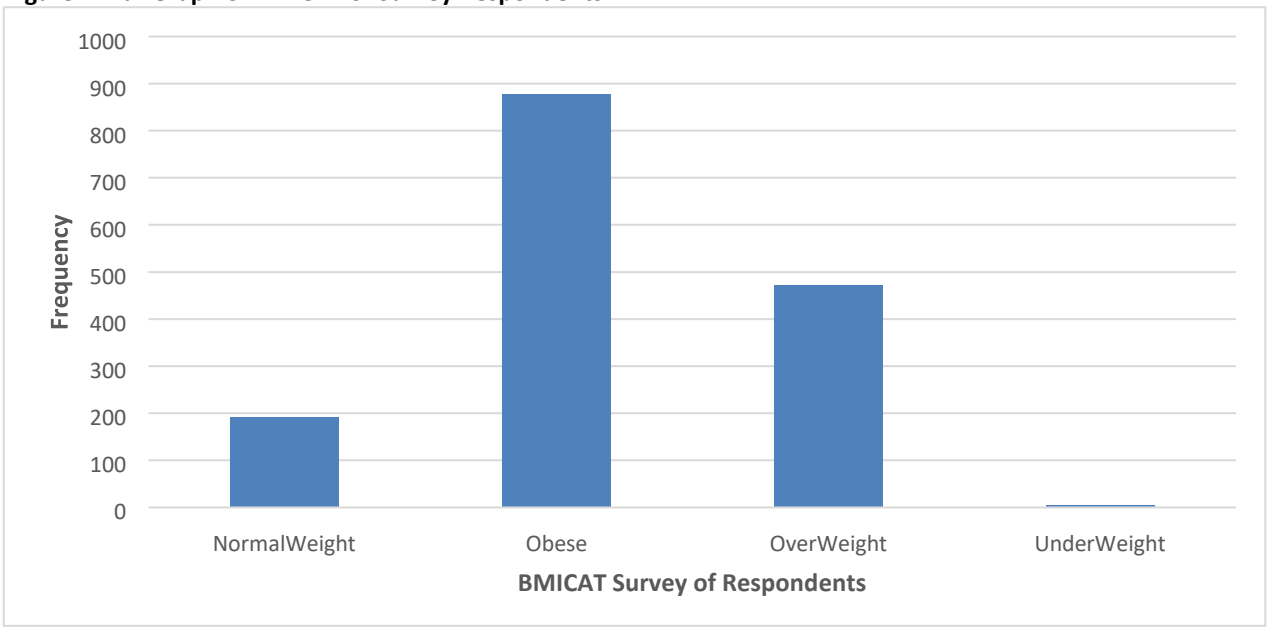
Figure 1: Bar Graph of Health Status of Survey Respondents



4. Construct a bar graph for “BMICAT” in excel by following the steps below. Make sure to give your graph a title and label the axes.

The bar graph below shows the BMICAT of survey respondents in terms of frequency. Majority of the respondents had good and fair health status while only few respondents were in excellent health status category. Majority of the survey respondents were obese, and a sizable number were overweight. The number of normal weight respondents was below 200.

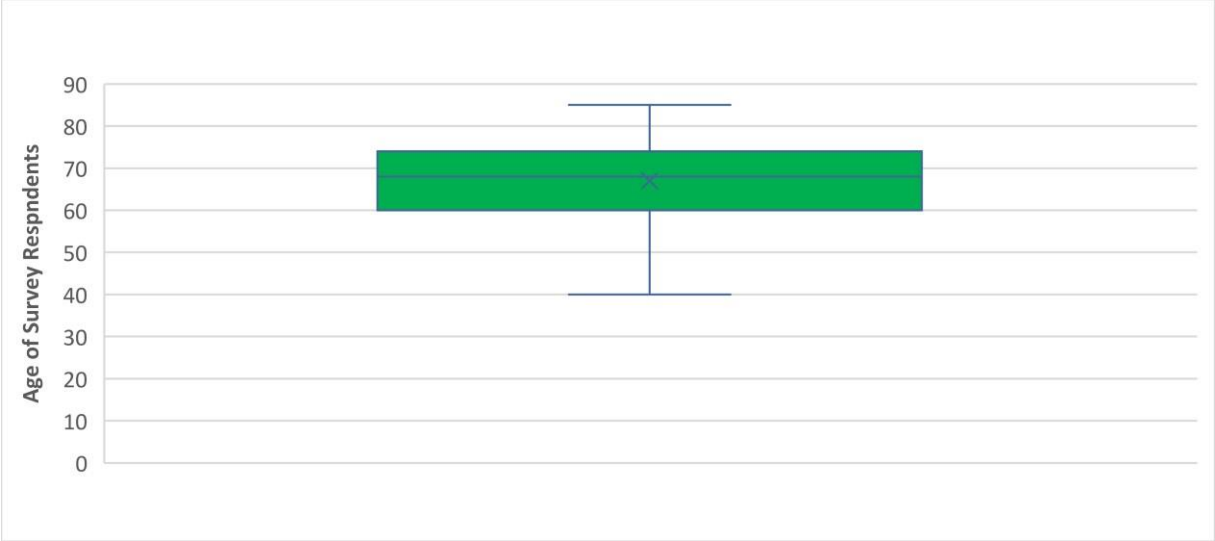
Figure 2: Bar Graph of BMICAT of Survey Respondents



5. Construct a boxplot for “AGE” in excel by following the steps below. Make sure to give your graph a title and label the axes. (Watch this video first Make sure to give your graph a title and label the axes.

The boxplot below shows the age distribution of survey respondents. From the left whisker, it appears the distribution of age is left skewed (negatively skewed) with no outliers.

Figure 3: Boxplot of Age of Survey Respondents



6. Construct a side-by-side boxplot for “POVLEV” by REGION in excel by following the steps below. Make sure to give your graph a title and label the axes. (Watch this video first Make sure to give your graph a title and label the axes.

The graph below shows a side-by-side boxplot comparing POVLEV by region of survey respondents. It appears the distribution of POVLEV across the four (4) regions are positively skewed (right skewed) with the presence of outliers in the regions labeled South and North Central/Midwest.

Figure 4: Side-by-Side Boxplot of POVLEV by Region of Survey Respondents