BMI Distribution

1 Introduction

2 Exploratory Analysis

Table 1 shows the Mean, Median and Standard deviation of the BMI results from 2013 - 2016. Looking at Table 1 Below, we can see that the mean and median values for the BMI have a slight increase from 2013 to 2016, which would suggest that there is a population-wide trend of increasing BMI values.

Also, the standard deviation results provide information about the variability or spread of the BMI values within each of the years. The standard deviation results from Table 1 also increase from the 2013 - 2016, indicating that there is more diversity in the BMI results in 2015 and 2016.

Table 1: Mean, Median and Standard deviation of the BMI from 2013-2016

Year	Mean	Median	SD
2013	27.81	27.08	5.28
2014	27.84	27.17	5.21
2015	28.02	27.26	5.53
2016	28.03	27.28	5.79

Figure 1 shows that despite the similar median and quartile values, there are notable differences in the spread and variability of the BMI results across the 4 years, with 2015 and 2016 having the most outliers. The presence of many outliers suggests that there is substantial variability and dispersion of BMI results for each year.

Looking at Figure 2 below, we can see that it is slightly right skewed with the majority of the observations on the left-hand side of the histogram and a long tail extending towards the right. A right skewed histogram is also known as a positively skewed histogram and the peak of the

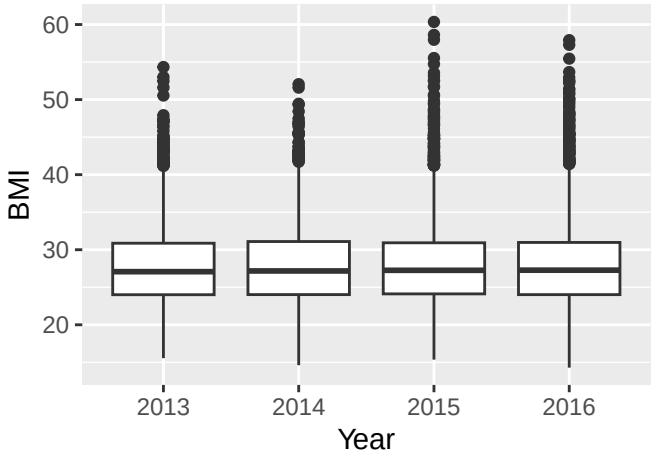

Figure 1: Boxplot for the BMI results for each year

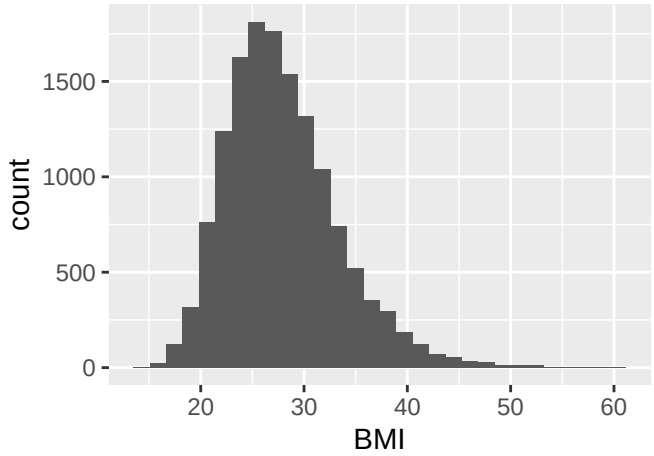

Figure 2: Histogram of the BMI results

graph can be found on the left-hand side and more specifically, between 20-30 BMI from the results.

Table 2 Shows the correlation between BMI and the other variables in the data. Here, we can see that all the correlation results are of very low correlation which suggests that the variables under consideration are not strongly related in a linear manner. Maybe looking at each year separately would show more accurate results and help find variables that are of stronger correlation.

Table 2: Correlation between BMI and other variables

Variables	Correlation
Age	0.14537
Sex	0.00512
Education	−0.00150
Veg	−0.00937
Fruit	0.02094

Now we will look at the formal analysis for each of the questions of interest below.

3 Formal Analysis

4 Conclusions