

1.

a) Correlation between TV time and Cholesterol : $r = 0.389$ with $p = 0.01$ level of significance.

Comment: Here $r = 0.389$ means the moderate positive correlation. The correlation is positive so if TV time increases, the cholesterol is also increase.

Correlations

		TV time	Cholesterol
TV time	Pearson Correlation	1	.389**
	Sig. (2-tailed)		.000
	N	100	100
Cholesterol	Pearson Correlation	.389**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

b) Correlation between TV time and BMI : $r = 0.112$ with $p = 0.01$ level of significance.

Comment: Here $r = 0.112$ means the strong positive correlation. The correlation is strong positive so if TV time increases, the BMI is also increase.

Correlations

		TV time	BMI
TV time	Pearson Correlation	1	.112
	Sig. (2-tailed)		.269
	N	100	100
BMI	Pearson Correlation	.112	1
	Sig. (2-tailed)	.269	
	N	100	100

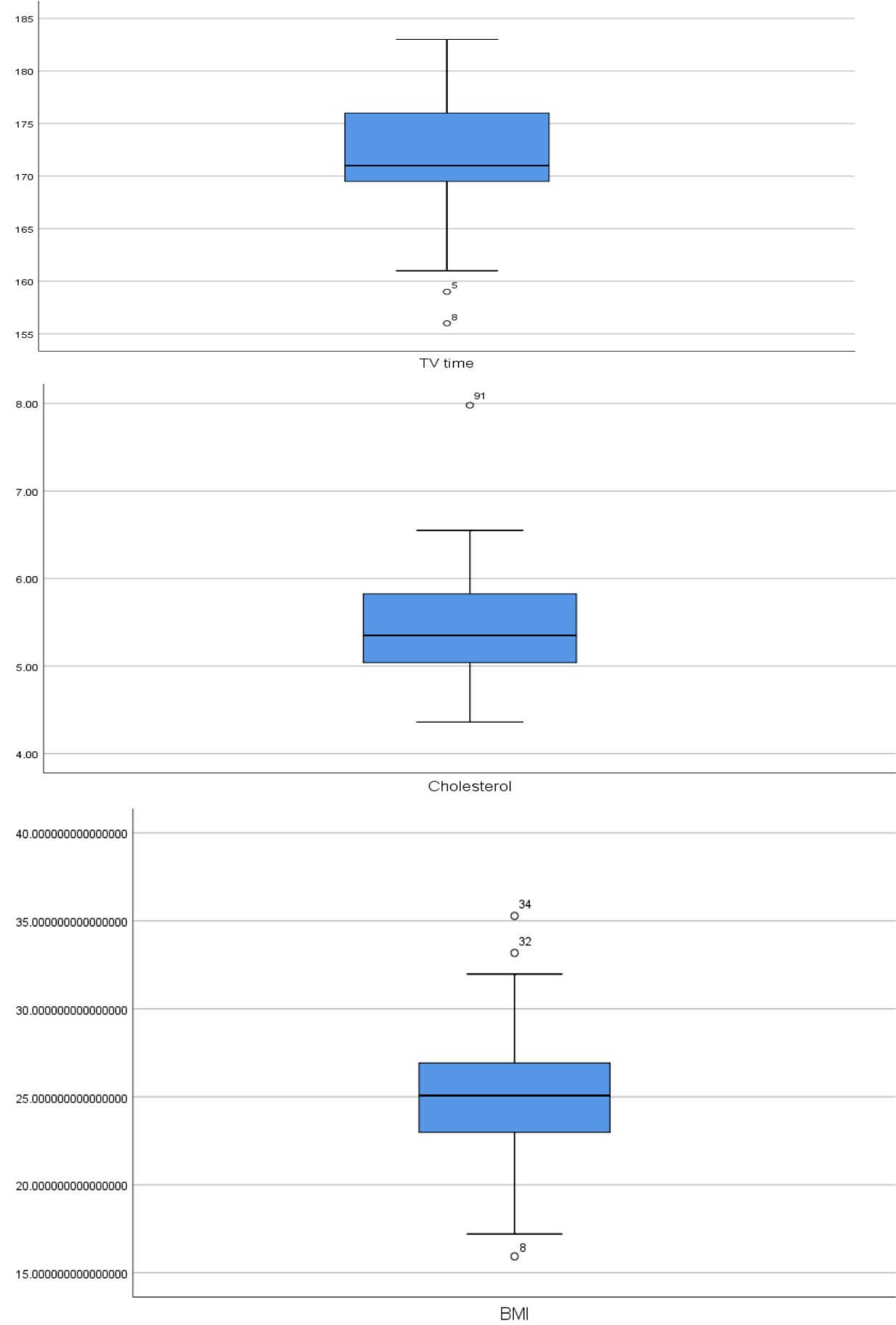
c) Correlation between Cholesterol and BMI : $r = 0.027$ with $p = 0.01$ level of significance.

Comment: Here $r = 0.022$ means the extremely weak positive correlation. The correlation doesn't implies caution in dataset.

Correlations

		Cholesterol	BMI
Cholesterol	Pearson Correlation	1	.027
	Sig. (2-tailed)		.788
	N	100	100
BMI	Pearson Correlation	.027	1
	Sig. (2-tailed)	.788	
	N	100	100

4. Box plot of Tv time, cholesterol and BMI

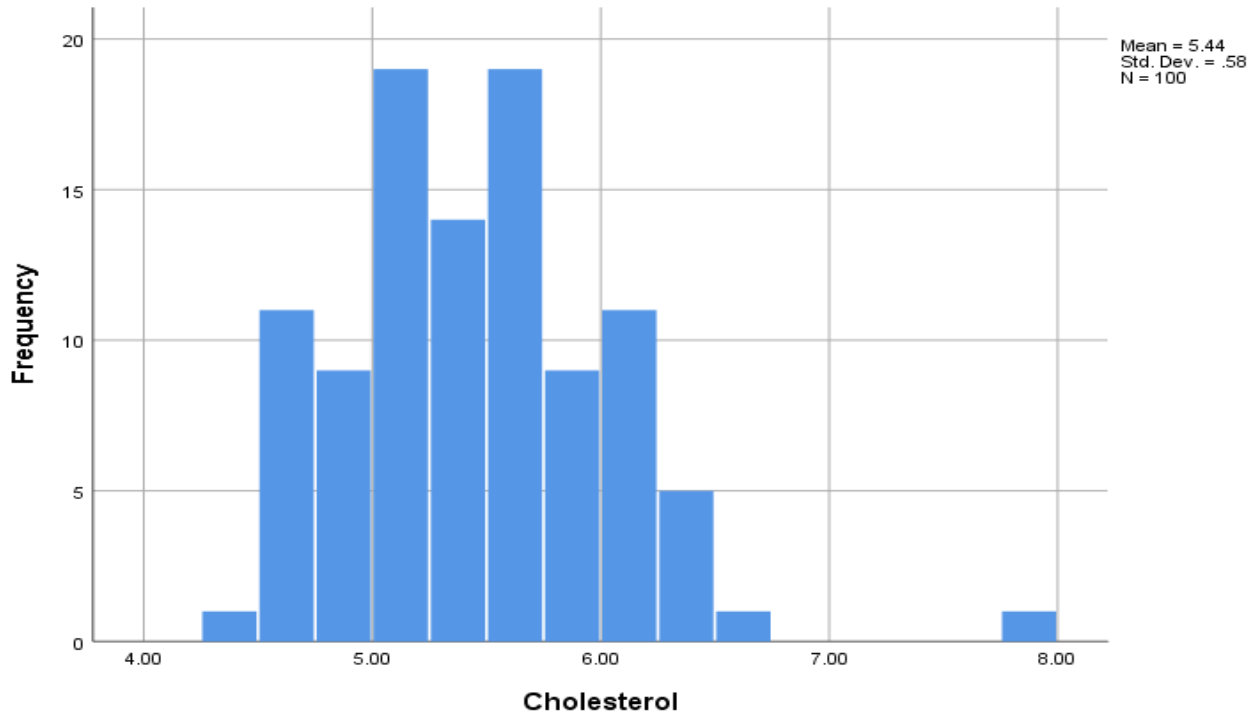


5. TV times has 2 outliers . They are case no 5 and 8. The values are 159 & 156.

6. Cholesterol has 1 outliers. It is case no 91. The value is 7.98

7. BMI has 3 outliers. They are case no 8, 32 & 34. The values are respectively 15.9, 33.1, 35.2

8. The Histogram is



As The distribution is positively skewed. Because The skewness statistic is 0.889 greater than 0. And in histogram we see that the tail of the distribution is in right. So The Distribution is positively Skewed.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Cholesterol	100	4.36	7.98	5.4406	.58015	.889	.241
Valid N (listwise)	100						

9. The Linear regression is :

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.127	1.812		-1.174	.243
	TV time	.044	.011	.389	4.179	.000

Dependent Variable: Cholesterol

Here Regression Equation $Y = 0.044 * X - 2.127$

Where $Y = \text{Cholesterol}$, $X = \text{TV time}$

And $R^2 = 0.151$

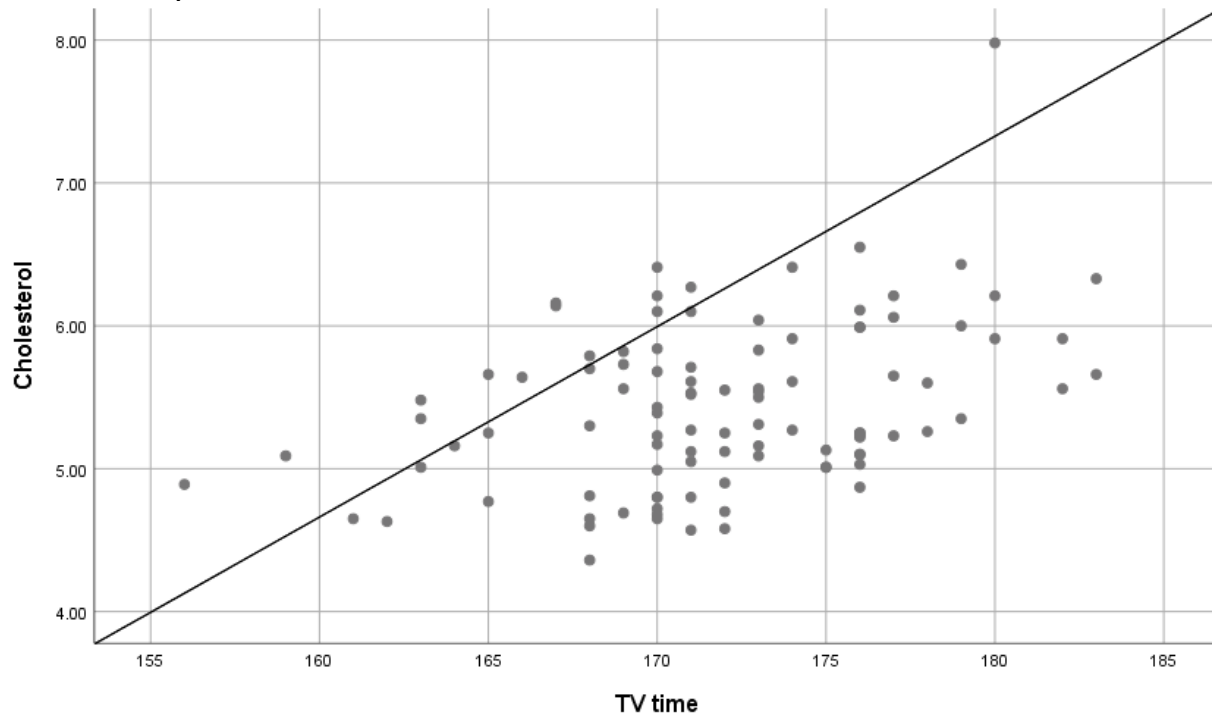
So the 15.1% of the variation In Cholesterol is not accounted for by TV Time.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.389 ^a	.151	.143	.53721

a. Predictors: (Constant), TV time

10. The scatterplot is:



Here the fitted line is $Y = 0.1333 * x - 16.6667$