

## **ANALYSIS AND INTERPRETATION OF DATA**

It is obvious that the investigator in the third chapter of his study mentioned the research design and methodology, basis of the research, variables under study, population, sample, instruments used and procedure for data collection and statistical techniques used for data analysis. In the research data analysis is well-thought-out as the heart of the research work. The scores which are gathered from the collected data have no worth unless and until it is analyzed and interpreted by employing suitable scientific techniques. By the help of analysis all the complex factors involved are breaking down into small and simple parts and also keeps them in new arrangements for the purpose of interpretation.

In research study the researcher should not only be acquainted with the precision of the data collection and the reliability and validity of the tools to achieve the targeted objectives and to accomplish the study but also the researcher should be acquainted with the different application of statistical analysis. The data analysis also aims to take out relevant information and can also facilitate conclusion of the study. Data analysis is that systematic process by which the researcher applies different statistical and or logical techniques to designate, explain, summarize, recapitulate and assess the data. In this study the analysis of data was done with IBM SPSS 29.

In the current study the researcher has made an effort in order to analyze and interpret the data of the present study by employing MANOVA as statistical technique.

### **4.1 MANOVA or Multiple Regressions**

Multivariate analysis of variance (MANOVA) is basically an ANOVA with several dependent variables. Generally regression analysis means the estimation and prediction of the unknown value of one variable from the known value of the other value. Regression analysis is a mathematical measure of the average relationship between two or more variables in terms of the original units of the data. Regression analysis is simply the statistical relationship of dependent and independent variables. In regression analysis we have only two variables, one variable which is known as independent variable is the cause of the behavior of another one which is known as dependent

variable. In regression analysis independent variable is also known as regressor or predictor or explanatory whereas the dependent variable is also known as regressed or explained variable. The regression analysis when confined to study only two variables at a time it is known as simple regression but when it is used for studying more than two variables at a time is known as multiple regression.

**Objective No.1: To study the Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students.**

**Hypothesis: There will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students.**

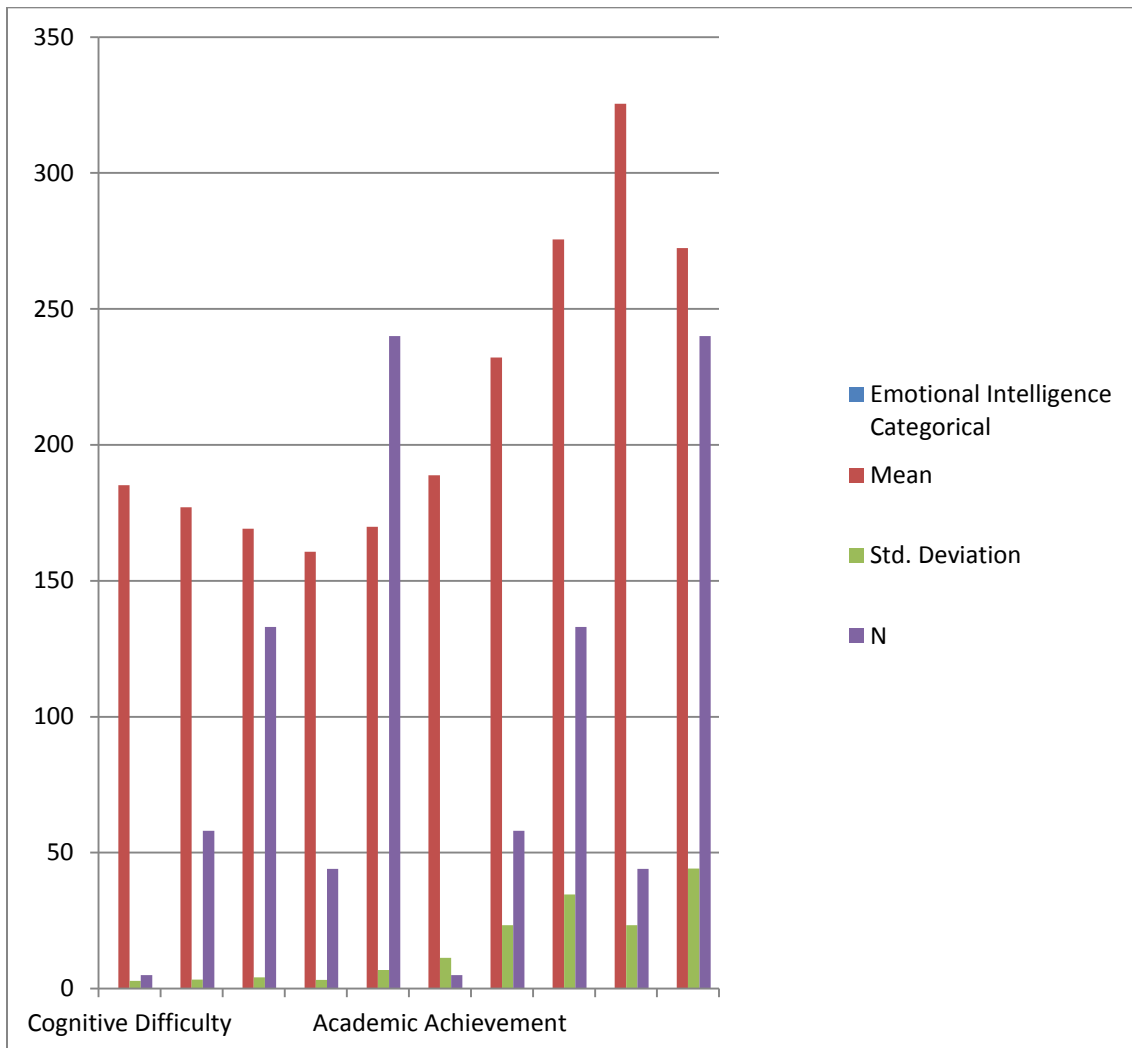
**Table No. 4.1: Descriptive Statistics of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students.**

**Table No.4.1: Descriptive Statistics**

	Emotional Intelligence Categorical	Mean	Standard Deviation	N
Cognitive Difficulty	100-109	185.2000	2.86356	5
	110-119	177.0862	3.31548	58
	120-129	169.1429	4.09757	133
	130-140	160.7273	3.18692	44
	Total	169.8542	6.86264	240
Academic Achievement	100-109	188.8000	11.27830	5
	110-119	232.1207	23.31634	58
	120-129	275.5714	34.58680	133
	130-140	325.4773	23.30135	44
	Total	272.4125	44.20796	240

Table No.4.1 reveals that the descriptive statistics of the dependent variables of higher secondary students and levels of Emotional Intelligence. The above table shows the mean score of cognitive difficulty and academic achievement of higher secondary students in different levels of Emotional Intelligence. It is also represented by the above analysis that the students having different scores of emotional intelligence in all the categories have different mean scores and the number of students were displayed in each category

(A)



**Table No. 4.2: Multivariate Tests of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students.**

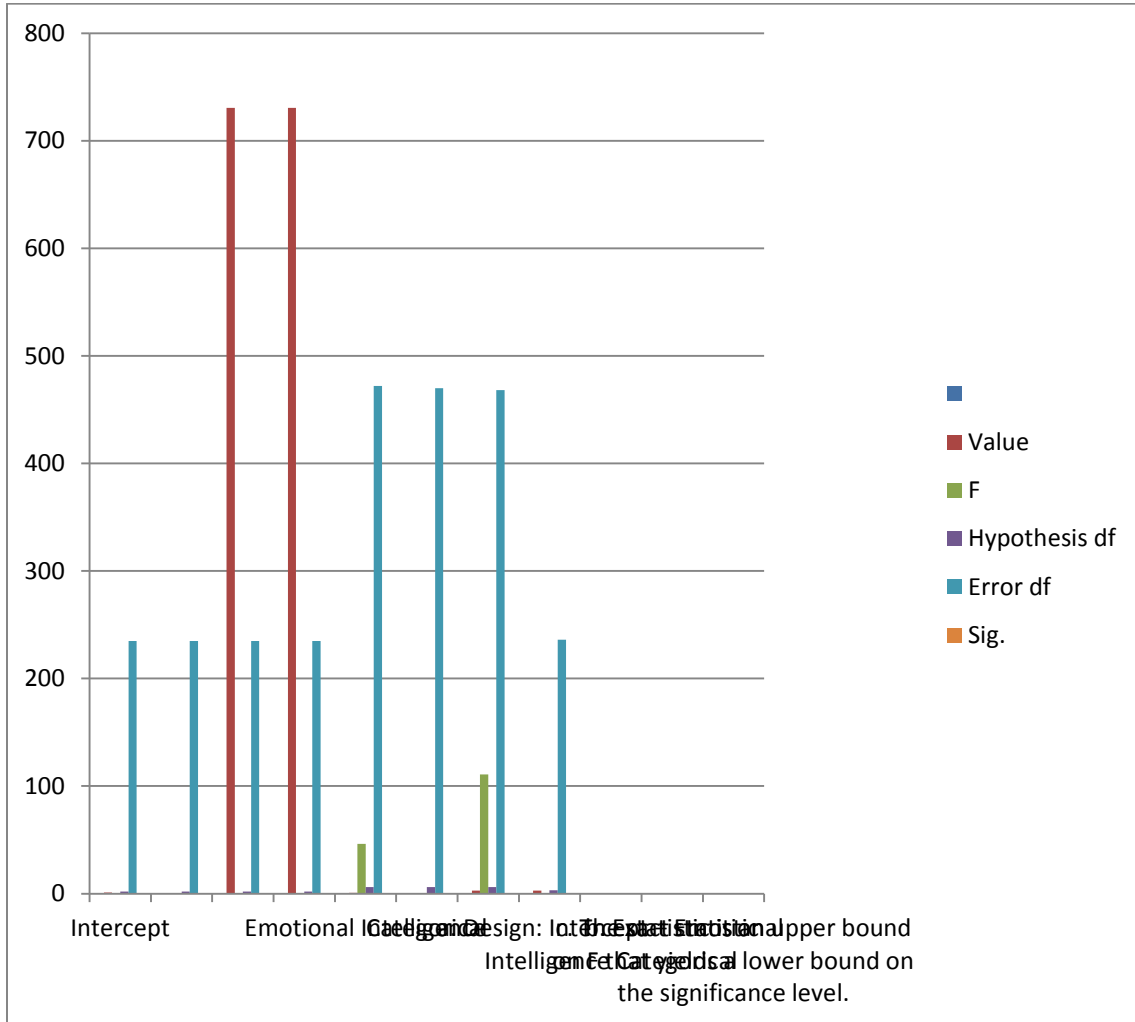
**Table No.2: Multivariate Tests**

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.999	85827.049 <sup>b</sup>	2.000	235.000	.000
	Wilks' Lambda	.001	85827.049 <sup>b</sup>	2.000	235.000	.000
	Hotelling's Trace	730.443	85827.049 <sup>b</sup>	2.000	235.000	.000
	Roy's Largest Root	730.443	85827.049 <sup>b</sup>	2.000	235.000	.000
Emotional Intelligence Categorical	Pillai's Trace	.741	46.300	6.000	472.000	.000
	Wilks' Lambda	.260	75.335 <sup>b</sup>	6.000	470.000	.000
	Hotelling's Trace	2.845	110.959	6.000	468.000	.000
	Roy's Largest Root	2.844	223.725 <sup>c</sup>	3.000	236.000	.000
a. Design: Intercept + Emotional Intelligence Categorical						
b. Exact statistic						
c. The statistic is an upper bound on F that yields a lower bound on the significance level.						

We have Wilks' Lambda test p-value statistically significant (<0.05), hence we conclude that linear combination of Cognitive Difficulty and Academic Achievement differs between different levels of Emotional Intelligence in higher secondary students. The p-values, statistic values for Wilks' Lambda are given in above table no.3. Hence the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students is rejected. So emotional intelligence has a significant effect on the student's cognitive difficulty and academic achievement of students. The p value is less than alpha 0.05 level of significance which shows that emotional intelligence determines

the cognitive difficulty and academic achievement of students. So emotional intelligence has a significant role in effecting the cognitive difficulty and academic achievement of students. So it is stated that the earlier framed hypothesis was rejected which signifies that emotional intelligence has a positive effect on cognitive difficulty and academic achievement of students.

(B)



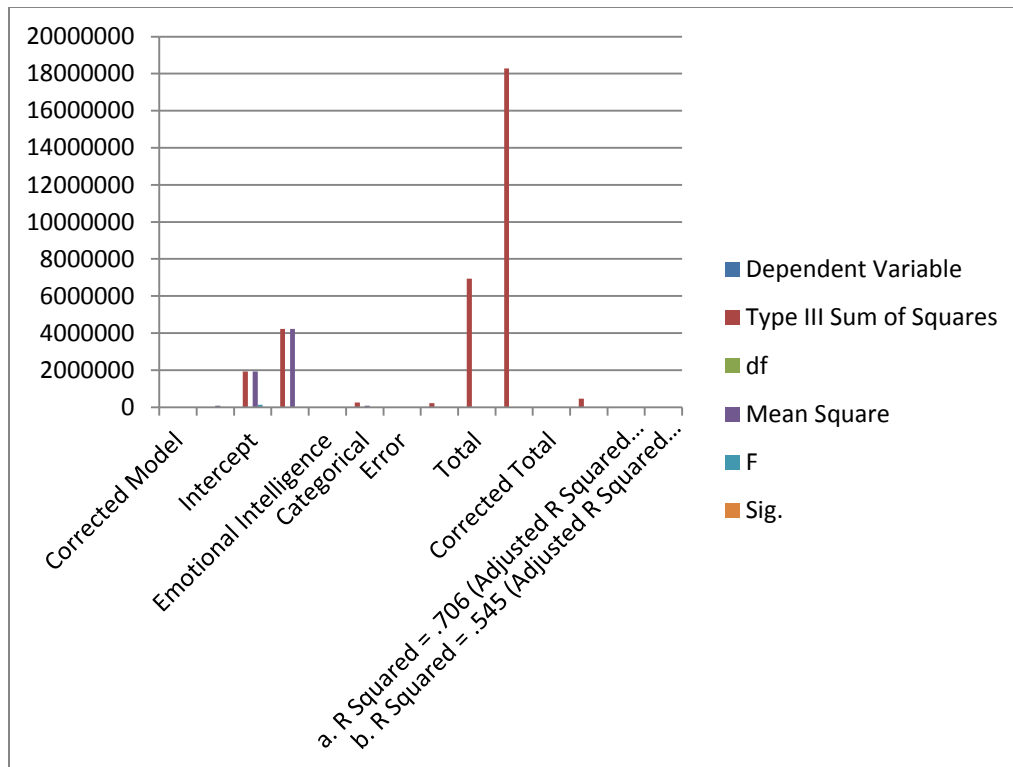
**Table No.4.3: Tests of Between-Subjects Effects of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty an Academic Achievement of Higher Secondary Students.**

**Table No.3: Tests of Between-Subjects Effects**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Cognitive Difficulty	7943.514 <sup>a</sup>	3	2647.838	188.653	.000
	Academic Achievement	254339.659 <sup>b</sup>	3	84779.886	94.046	.000
Intercept	Cognitive Difficulty	1935776.527	1	1935776.527	137919.862	.000
	Academic Achievement	4220098.595	1	4220098.595	4681.317	.000
Emotional Intelligence Categorical	Cognitive Difficulty	7943.514	3	2647.838	188.653	.000
	Academic Achievement	254339.659	3	84779.886	94.046	.000
Error	Cognitive Difficulty	3312.382	236	14.036		
	Academic Achievement	212748.504	236	901.477		
Total	Cognitive Difficulty	6935361.000	240			
	Academic Achievement	18277145.000	240			
Corrected Total	Cognitive Difficulty	11255.896	239			
	Academic Achievement	467088.162	239			
a. R Squared = .706 (Adjusted R Squared = .702)						
b. R Squared = .545 (Adjusted R Squared = .539)						

From the above table it is clear that difference in cognitive scores between different levels of Emotional Intelligence as well as marks obtained scores between different levels of Emotional Intelligence differ statistically in all the higher secondary students (p-values for Cognitive Difficulty and Academic Achievement are less than 0.05 level of significance). So the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students is rejected.

(C)



**Objective No.2:** To study the impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of class higher secondary students with reference to Gender (Boys/girls).

**Hypothesis:** There will be no significant impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to Gender (Boys/ girls).

**Table No. 4.4:** Descriptive Statistics of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to gender (boys/girls)

**Table No. 4.4: Descriptive Statistics**

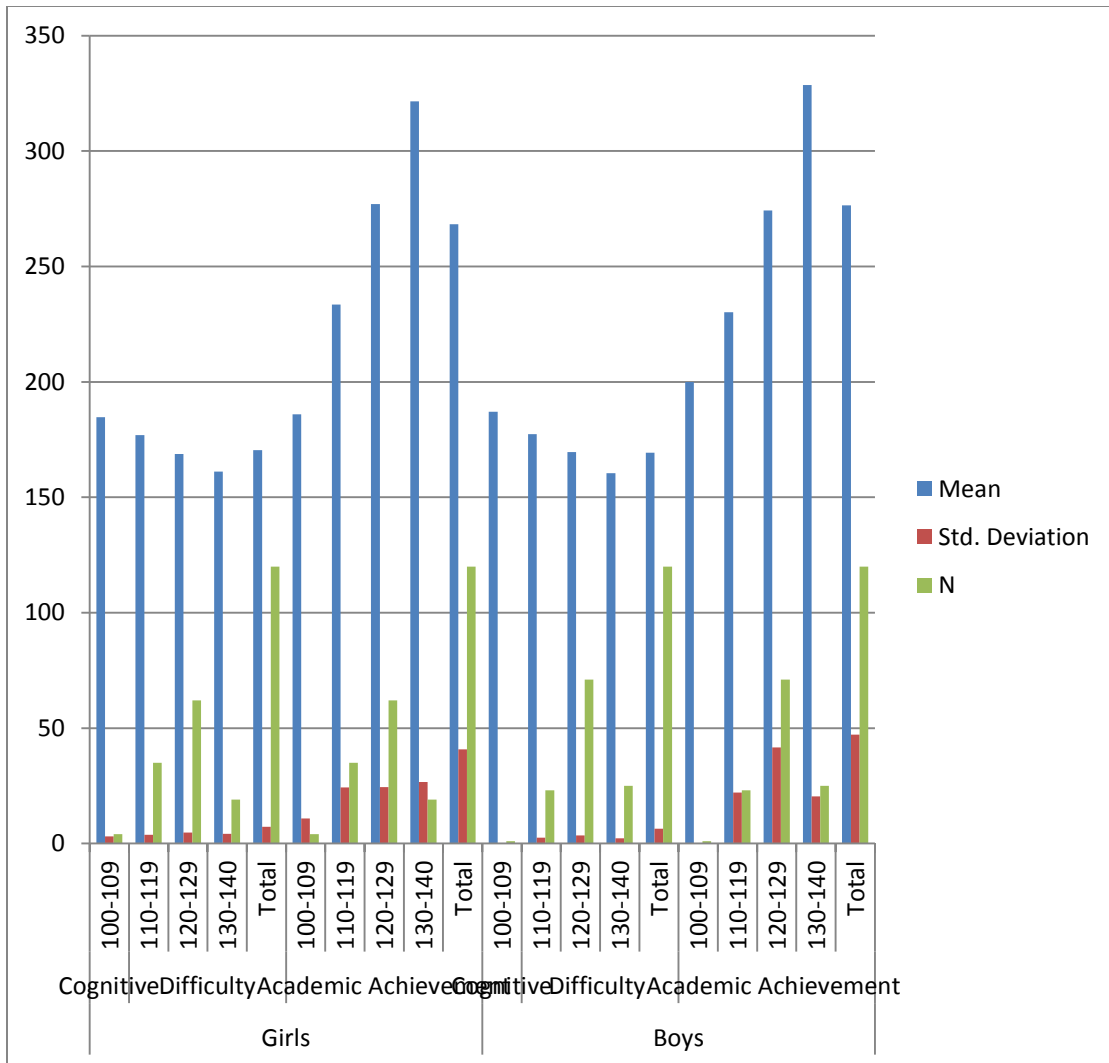
Gender		EI_Categorical	Mean	Standard. Deviation	N
Girls	Cognitive Difficulty	100-109	184.7500	3.09570	4
		110-119	176.8857	3.78675	35
		120-129	168.7097	4.69177	62
		130-140	161.1579	4.14009	19
		Total	170.4333	7.25494	120
	Academic Achievement	100-109	186.0000	10.83205	4
		110-119	233.4286	24.34469	35
		120-129	277.0645	24.41571	62
		130-140	321.4737	26.70907	19
		Total	268.3333	40.77450	120
Boys	Cognitive Difficulty	100-109	187.0000	.	1
		110-119	177.3913	2.48155	23
		120-129	169.5211	3.48818	71
		130-140	160.4000	2.25462	25
		Total	169.2750	6.42469	120
	Academic Achievement	100-109	200.0000	.	1
		110-119	230.1304	22.03985	23
		120-129	274.2676	41.62450	71
		130-140	328.5200	20.38202	25
		Total	276.4917	47.21220	120

Table no.4.4 presents the descriptive statistics of the dependent variables with respect to gender and levels of Emotional Intelligence. The above table shows the mean score of cognitive difficulty and academic achievement of gender (boys/girls) in different levels of Emotional



Intelligence. The number of students given in table fall in different categories of emotional intelligence with diverse mean scores at each level. It also shows the mean score of students gender wise in all the categories of emotional intelligence which shows the mean score of both boys and girls separately.

(D)



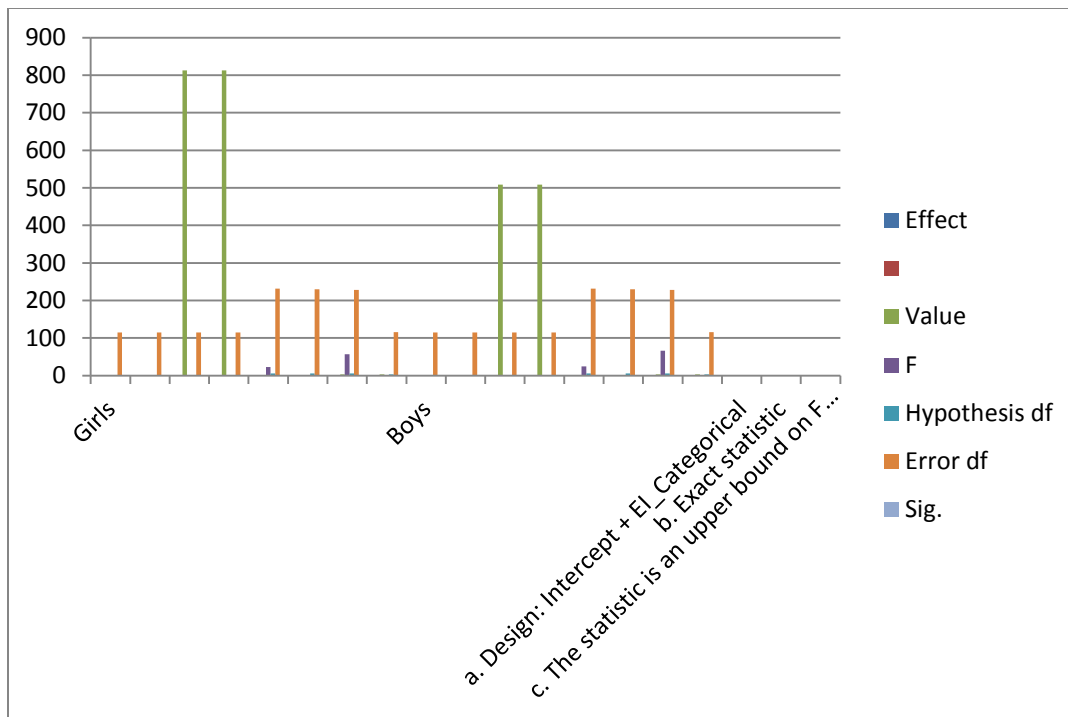
**Table No. 4.5: Multivariate Tests of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to gender (boys/girls).**

**Table No. 4.5: Multivariate Tests**

Gender	Effect	Value	F	Hypothesis df	Error df	Sig.	
Girls	Intercept	Pillai's Trace	.999	46707.956 <sub>b</sub>	2.000	115.000	.000
		Wilks' Lambda	.001	46707.956 <sub>b</sub>	2.000	115.000	.000
		Hotelling's Trace	812.312	46707.956 <sub>b</sub>	2.000	115.000	.000
		Roy's Largest Root	812.312	46707.956 <sub>b</sub>	2.000	115.000	.000
	Emotional Intelligence Categorical	Pillai's Trace	.750	23.203	6.000	232.000	.000
		Wilks' Lambda	.251	38.175 <sup>b</sup>	6.000	230.000	.000
		Hotelling's Trace	2.979	56.604	6.000	228.000	.000
		Roy's Largest Root	2.978	115.138 <sup>c</sup>	3.000	116.000	.000
Boys	Intercept	Pillai's Trace	.998	29223.142 <sub>b</sub>	2.000	115.000	.000
		Wilks' Lambda	.002	29223.142 <sub>b</sub>	2.000	115.000	.000
		Hotelling's Trace	508.229	29223.142 <sub>b</sub>	2.000	115.000	.000
		Roy's Largest Root	508.229	29223.142 <sub>b</sub>	2.000	115.000	.000
	Emotional Intelligence Categorical	Pillai's Trace	.783	24.903	6.000	232.000	.000
		Wilks' Lambda	.221	43.241 <sup>b</sup>	6.000	230.000	.000
		Hotelling's Trace	3.509	66.670	6.000	228.000	.000
		Roy's Largest Root	3.503	135.464 <sup>c</sup>	3.000	116.000	.000
a. Design: Intercept + Emotional Intelligence Categorical							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							

We have Wilks' Lambda test p-value statistically significant ( $<0.05$ ), hence we conclude that linear combination of Cognitive and Marks Obtained differs between different levels of Emotional Intelligence in both boys and girls students. The p-values, statistic values for Wilks' Lambda are given in above table no.4.5. Hence the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to their gender ((boys/girls) is rejected. So emotional intelligence has a significant effect on the student's cognitive difficulty and academic achievement of students. The p value is less than alpha 0.05 level of significance which shows that emotional intelligence determines the cognitive difficulty and academic achievement of students. So it is stated that the earlier framed hypothesis was rejected which signifies that emotional intelligence has a positive effect on cognitive difficulty and academic achievement of students.

(E)



**Table No.4.6: Tests of Between-Subjects Effects of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to gender (boys/girls).**

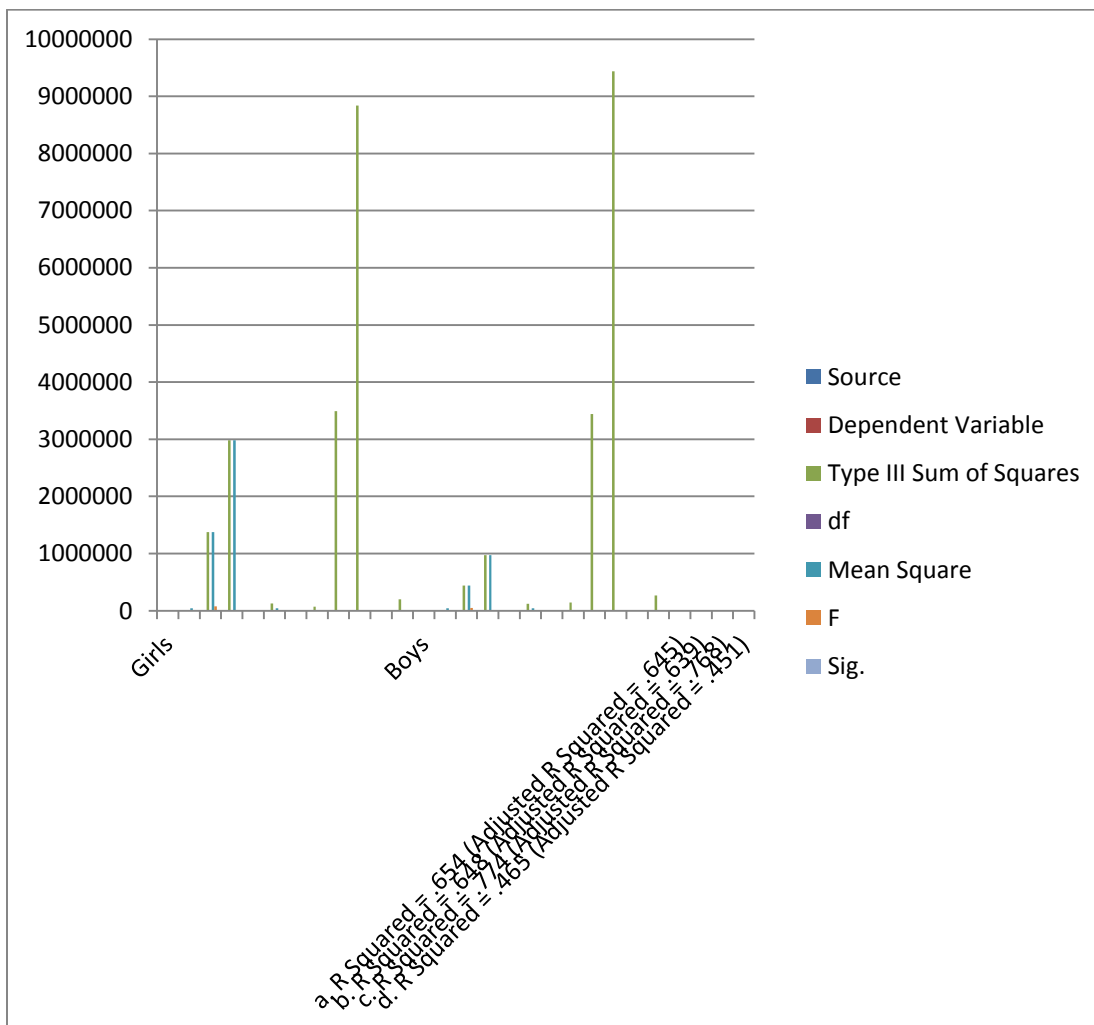
**Table No. 4.6: Tests of Between-Subjects Effects**

Gender	Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	
Girls	Corrected Model	Cognitive Difficulty	4095.873 <sup>a</sup>	3	1365.291	73.064	.000	
		Academic Achievement	128137.616 <sup>b</sup>	3	42712.539	71.078	.000	
	Intercept	Cognitive Difficulty	1376713.751	1	1376713.751	73675.625	.000	
		Academic Achievement	2983474.686	1	2983474.686	4964.822	.000	
	Emotional Intelligence	Cognitive Difficulty	4095.873	3	1365.291	73.064	.000	
		Academic Achievement	128137.616	3	42712.539	71.078	.000	
	Error	Cognitive Difficulty	2167.593	116	18.686			
		Academic Achievement	69707.050	116	600.923			
	Total	Cognitive Difficulty	3491966.000	120				
		Academic Achievement	8838178.000	120				
	Corrected Total	Cognitive Difficulty	6263.467	119				
		Academic Achievement	197844.667	119				
	Boys	Corrected Model	Cognitive	3802.728 <sup>c</sup>	3	1267.576	132.563	.000
			Academic Achievement	123311.227 <sup>d</sup>	3	41103.742	33.592	.000
Intercept		Cognitive Difficulty	439218.390	1	439218.390	45933.547	.000	
		Academic Achievement	972080.786	1	972080.786	794.437	.000	

	Emotional Intelligence Categorical	Cognitive Difficulty	3802.728	3	1267.576	132.563	.000	
		Academic Achievement	123311.227	3	41103.742	33.592	.000	
	Error	Cognitive Difficulty	1109.197	116	9.562			
		Academic Achievement	141938.764	116	1223.610			
	Total	Cognitive Difficulty	3443395.000	120				
		Academic Achievement	9438967.000	120				
	Corrected Total	Cognitive Difficulty	4911.925	119				
		Academic Achievement	265249.992	119				
	a. R Squared = .654 (Adjusted R Squared = .645)							
	b. R Squared = .648 (Adjusted R Squared = .639)							
	c. R Squared = .774 (Adjusted R Squared = .768)							
	d. R Squared = .465 (Adjusted R Squared = .451)							

From the above table, it is clear that the difference in cognitive scores between different levels of Emotional Intelligence as well as marks obtained scores between different levels of Emotional Intelligence differ statistically in both boys and girls (p-values for Cognitive Difficulty and Academic Achievement are less than 0.05 level of significance). So the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to their gender ((boys/girls) is rejected. Hence it is implied that emotional intelligence has a significant role in determining the cognitive difficulty and academic achievement of students. The r square also shows that there is a very significant effect of emotional intelligence on cognitive difficulty and academic achievement of students.

(F)



**Objective No.3:** To study the impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of class higher secondary students with reference to locality (rural/urban).

**Hypothesis:** There will be no significant impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to locality (rural/urban).

**Table No. 4.7:** Descriptive Statistics of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to locality (rural/urban).

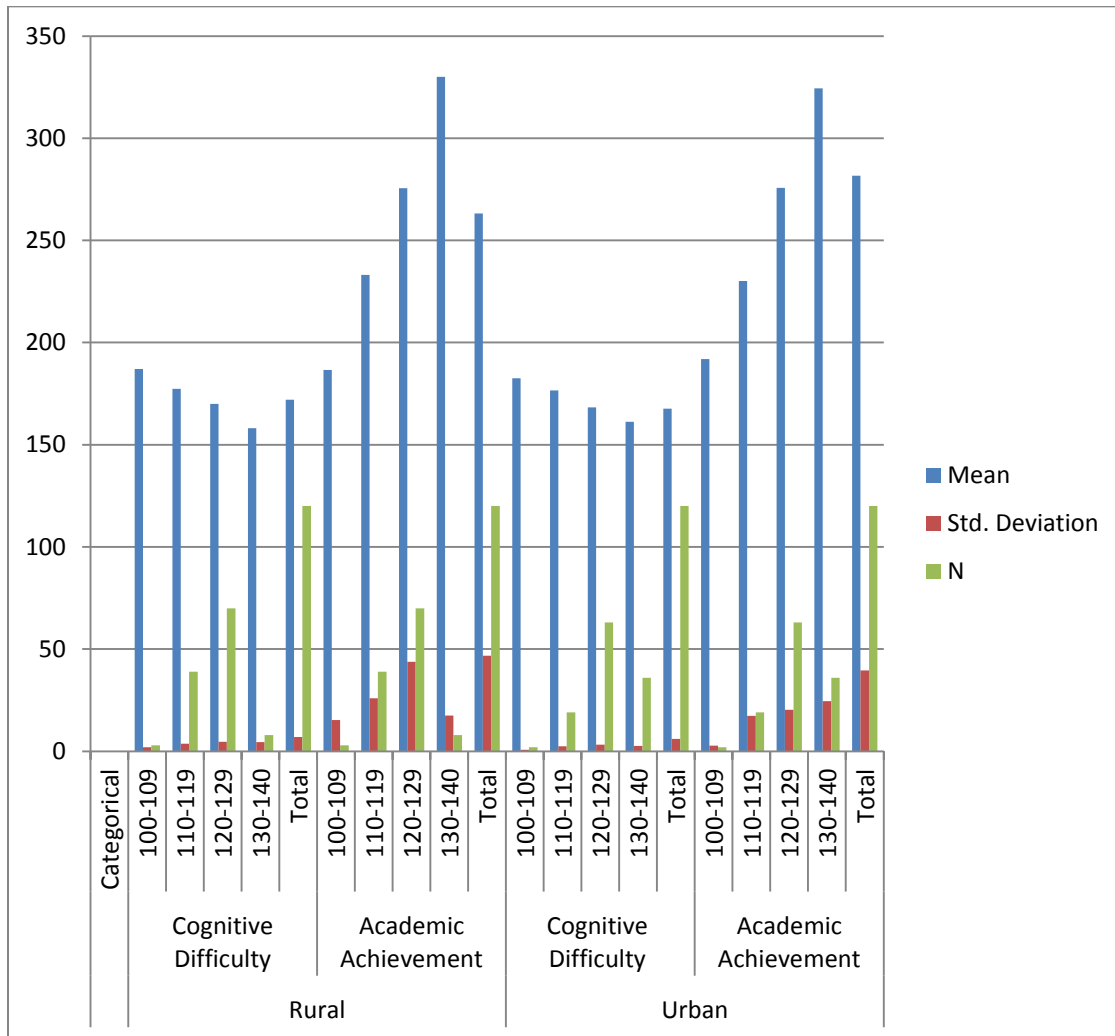
**Table No. 4.7: Descriptive Statistics**

Locality		Emotional Intelligence Categorical	Mean	Standard Deviation	N
Rural	Cognitive Difficulty	100-109	187.0000	2.00000	3
		110-119	177.3077	3.67891	39
		120-129	169.9571	4.58237	70
		130-140	158.1250	4.48609	8
		Total	171.9833	6.93182	120
	Academic Achievement	100-109	186.6667	15.27525	3
		110-119	233.0769	25.91015	39
		120-129	275.4714	43.82135	70
		130-140	330.0000	17.52549	8
		Total	263.1083	46.72713	120
Urban	Cognitive Difficulty	100-109	182.5000	.70711	2
		110-119	176.6316	2.43152	19
		120-129	168.2381	3.28591	63
		130-140	161.3056	2.56147	36
		Total	167.7250	6.11509	120
	Academic Achievement	100-109	192.0000	2.82843	2
		110-119	230.1579	17.26996	19
		120-129	275.6825	20.24115	63
		130-140	324.4722	24.49313	36
		Total	281.7167	39.58656	120

From the table no. 4.7 it is depicted that the descriptive statistics of the dependent variables with respect to locality and levels of Emotional Intelligence. The above table shows the mean score of cognitive difficulty and academic achievement of locality (rural/urban) in different levels of

Emotional Intelligence. The r square also shows that there is a very significant effect of emotional intelligence on cognitive difficulty and academic achievement of students. So the students having high emotional intelligence have least cognitive difficulty which results in their academic improvement and vice versa.

(G)



**Table No. 4.8: Multivariate Tests of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to locality (rural/urban).**

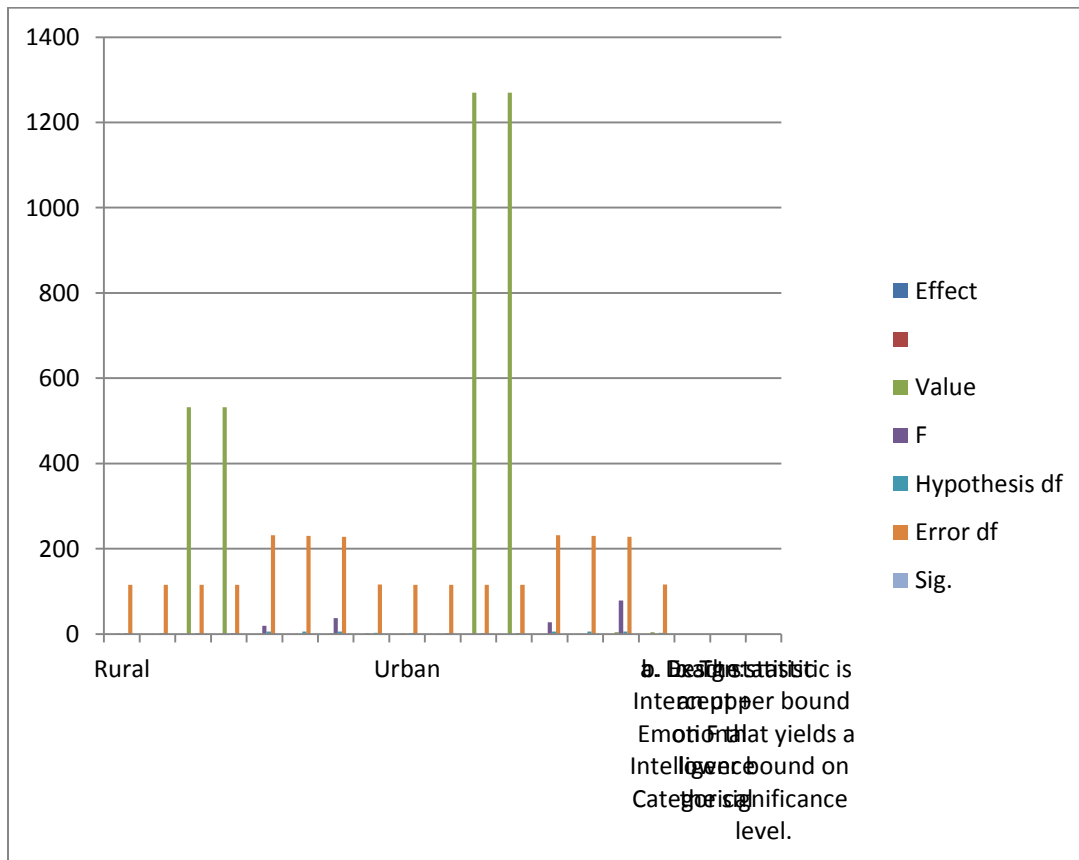


**Table No. 4.8: Multivariate Tests**

Locality	Effect	Value	F	Hypothesis df	Error df	Sig.	
Rural	Intercept	Pillai's Trace	.998	30594.026 <sup>b</sup>	2.000	115.000	.000
		Wilks' Lambda	.002	30594.026 <sup>b</sup>	2.000	115.000	.000
		Hotelling's Trace	532.070	30594.026 <sup>b</sup>	2.000	115.000	.000
		Roy's Largest Root	532.070	30594.026 <sup>b</sup>	2.000	115.000	.000
	Emotional Intelligence Categorical	Pillai's Trace	.665	19.278	6.000	232.000	.000
		Wilks' Lambda	.337	27.687 <sup>b</sup>	6.000	230.000	.000
		Hotelling's Trace	1.959	37.216	6.000	228.000	.000
		Roy's Largest Root	1.955	75.589 <sup>c</sup>	3.000	116.000	.000
Urban	Intercept	Pillai's Trace	.999	73003.716 <sup>b</sup>	2.000	115.000	.000
		Wilks' Lambda	.001	73003.716 <sup>b</sup>	2.000	115.000	.000
		Hotelling's Trace	1269.630	73003.716 <sup>b</sup>	2.000	115.000	.000
		Roy's Largest Root	1269.630	73003.716 <sup>b</sup>	2.000	115.000	.000
	Emotional Intelligence Categorical	Pillai's Trace	.826	27.222	6.000	232.000	.000
		Wilks' Lambda	.192	49.262 <sup>b</sup>	6.000	230.000	.000
		Hotelling's Trace	4.129	78.446	6.000	228.000	.000
		Roy's Largest Root	4.106	158.769 <sup>c</sup>	3.000	116.000	.000
a. Design: Intercept + Emotional Intelligence Categorical							
b. Exact statistic							
c. The statistic is an upper bound on F that yields a lower bound on the significance level.							

We have Wilks' Lambda test p-value statistically significant ( $<0.05$ ), hence we conclude that linear combination of Cognitive and Marks Obtained differs between different levels of Emotional Intelligence in both rural and urban students. The p-values, statistic values for Wilks' Lambda are given in above table no.4.8. Hence the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to their locality((rural/urban) is rejected. So it displays that emotional intelligence has a positive significant effect on cognitive difficulty and academic achievement of both rural and urban students.

(H)



**Table No.4.9: Tests of Between-Subjects Effects of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to locality (rural/urban).**

**Table No. 4.9: Tests of Between-Subjects Effects**

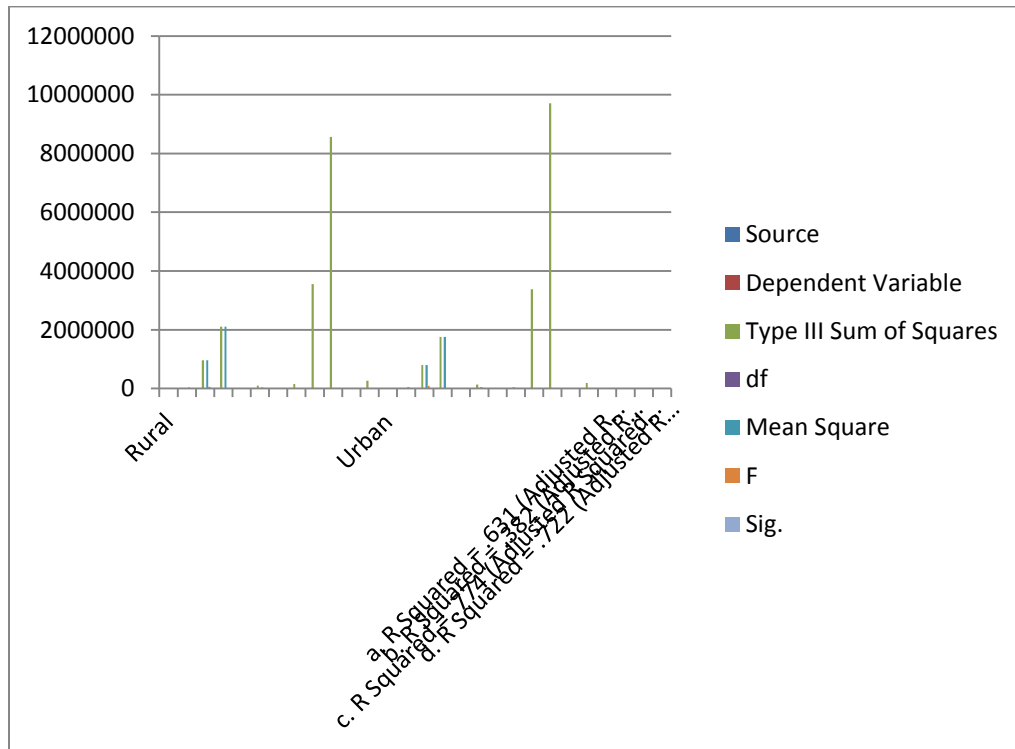
Locality	Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	
Rural	Corrected Model	Cognitive Difficulty	3605.913 <sup>a</sup>	3	1201.971	66.016	.000	
		Academic Achievement	99198.713 <sup>b</sup>	3	33066.238	23.879	.000	
	Intercept	Cognitive Difficulty	962155.528	1	962155.528	52844.309	.000	
		Academic Achievement	2109472.322	1	2109472.322	1523.380	.000	
	Emotional Intelligence Categorical	Cognitive Difficulty	3605.913	3	1201.971	66.016	.000	
		Academic Achievement	99198.713	3	33066.238	23.879	.000	
	Error	Cognitive Difficulty	2112.054	116	18.207			
		Academic Achievement	160628.879	116	1384.732			
	Total	Cognitive Difficulty	3555110.000	120				
		Academic Achievement	8566947.000	120				
	Corrected Total	Cognitive Difficulty	5717.967	119				
		Academic Achievement	259827.592	119				
	Urban	Corrected Model	Cognitive Difficulty	3443.936 <sup>c</sup>	3	1147.979	132.373	.000
			Academic Achievement	134709.217 <sup>d</sup>	3	44903.072	100.603	.000

	Intercept	Cognitive Difficulty	795384.190	1	795384.190	91715.328	.000
		Marks Obtained	1752731.954	1	1752731.954	3926.921	.000
	Emotional Intelligence Categorical	Cognitive Difficulty	3443.936	3	1147.979	132.373	.000
		Academic Achievement	134709.217	3	44903.072	100.603	.000
	Error	Cognitive Difficulty	1005.989	116	8.672		
		Academic Achievement	51775.149	116	446.337		
	Total	Cognitive Difficulty	3380251.000	120			
		Academic Achievement	9710198.000	120			
	Corrected Total	Cognitive Difficulty	4449.925	119			
		Academic Achievement	186484.367	119			
a. R Squared = .631 (Adjusted R Squared = .621)							
b. R Squared = .382 (Adjusted R Squared = .366)							
c. R Squared = .774 (Adjusted R Squared = .768)							
d. R Squared = .722 (Adjusted R Squared = .715)							

From the above table, it is demonstrated that the difference in cognitive scores between different levels of Emotional Intelligence as well as marks obtained scores between different levels of Emotional Intelligence differ statistically in both rural and urbans (p-values for Cognitive Difficulty and Academic Achievement are less than 0.05 level of significance). So the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty

and Academic Achievement of Higher Secondary Students with reference to their locality ((rural/urban) is rejected. The r square also shows a significant effect of emotional intelligence on cognitive difficulty and academic achievement of students.

(I)



**Objective No.4:** To study the impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of class higher secondary students with reference to type of school (Government/Private).

**Hypothesis:** There will be no significant impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to type of School (Government/Private).

**Table No. 4.10:** Descriptive Statistics of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to type of School (Government/Private).

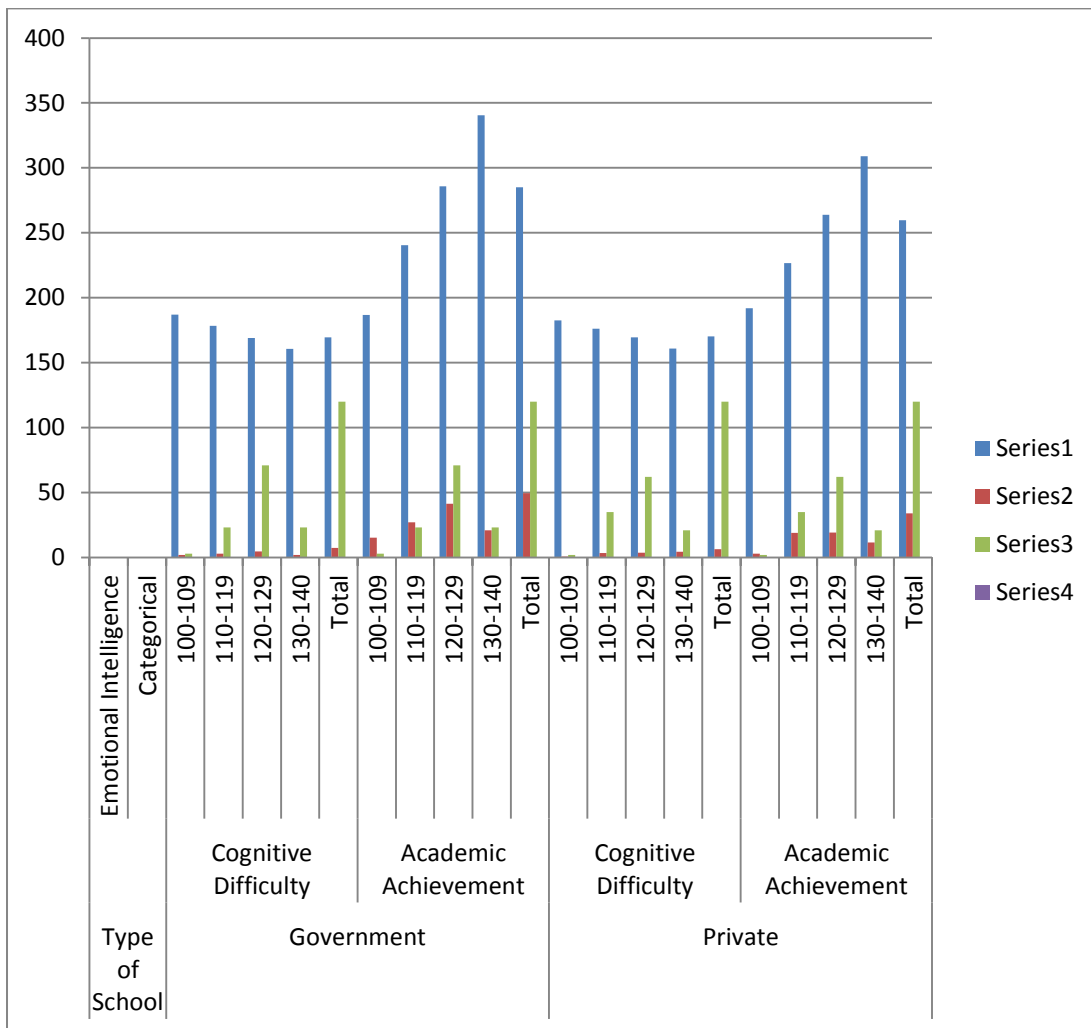
**Table No. 4.10: Descriptive Statistics**

Type of School		Emotional Intelligence Categorical	Mean	Standard. Deviation	N
Government	Cognitive Difficulty	100-109	187.0000	2.00000	3
		110-119	178.3913	2.82423	23
		120-129	168.8873	4.54988	71
		130-140	160.6087	1.82755	23
		Total	169.5750	7.26875	120
	Academic Achievement	100-109	186.6667	15.27525	3
		110-119	240.3913	27.10374	23
		120-129	285.8310	41.31931	71
		130-140	340.6087	21.00376	23
		Total	285.1417	49.51789	120
Private	Cognitive Difficulty	100-109	182.5000	.70711	2
		110-119	176.2286	3.37016	35
		120-129	169.4355	3.52332	62
		130-140	160.8571	4.25777	21
		Total	170.1333	6.44946	120
	Academic Achievement	100-109	192.0000	2.82843	2
		110-119	226.6857	18.95780	35
		120-129	263.8226	19.14699	62
		130-140	308.9048	11.41886	21
		Total	259.6833	33.85709	120

From the table no. 4.10 it is illustrated that the descriptive statistics of the dependent variables with respect to types of school and levels of Emotional Intelligence. The above table shows the

mean score of cognitive difficulty and academic achievement of types of school (government/private) in different levels of Emotional Intelligence. It also shows the mean score of students in different levels of emotional intelligence. The above analysis also demonstrates the emotional intelligence of students in different categories with reference to type of school government and private.

(J)



**Table No. 4.11: Multivariate Tests of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to locality (rural/urban).**

**Table No. 4.11: Multivariate Tests**

Types of School	Effect	Value	F	Hypothesis df	Error df	Sig.	
Government	Intercept	Pillai's Trace	.999	44488.564 <sup>b</sup>	2.000	115.000	.000
		Wilks' Lambda	.001	44488.564 <sup>b</sup>	2.000	115.000	.000
		Hotelling's Trace	773.714	44488.564 <sup>b</sup>	2.000	115.000	.000
		Roy's Largest Root	773.714	44488.564 <sup>b</sup>	2.000	115.000	.000
	Emotional Intelligence Categorical	Pillai's Trace	.764	23.920	6.000	232.000	.000
		Wilks' Lambda	.244	39.197 <sup>b</sup>	6.000	230.000	.000
		Hotelling's Trace	3.054	58.034	6.000	228.000	.000
		Roy's Largest Root	3.043	117.644 <sup>c</sup>	3.000	116.000	.000
Private	Intercept	Pillai's Trace	.999	55132.288 <sup>b</sup>	2.000	115.000	.000
		Wilks' Lambda	.001	55132.288 <sup>b</sup>	2.000	115.000	.000
		Hotelling's Trace	958.822	55132.288 <sup>b</sup>	2.000	115.000	.000
		Roy's Largest Root	958.822	55132.288 <sup>b</sup>	2.000	115.000	.000
	Emotional Intelligence Categorical	Pillai's Trace	.770	24.190	6.000	232.000	.000
		Wilks' Lambda	.231	41.470 <sup>b</sup>	6.000	230.000	.000
		Hotelling's Trace	3.332	63.311	6.000	228.000	.000
		Roy's Largest Root	3.332	128.822 <sup>c</sup>	3.000	116.000	.000

a. Design: Intercept + Emotional Intelligence Categorical

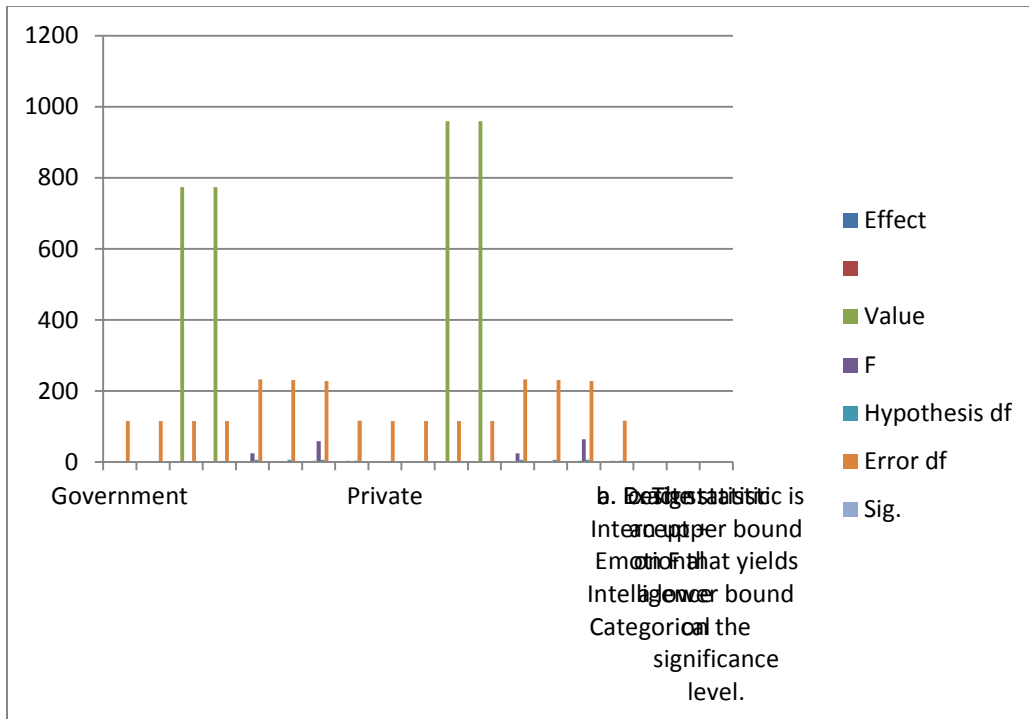
b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.



We have Wilks' Lambda test p-value statistically significant ( $<0.05$ ), hence we conclude that linear combination of Cognitive and Marks Obtained differs between different levels of Emotional Intelligence of both government and private school students. The p-values, statistic values for Wilks' Lambda are given in above table no.4.11. Hence the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to their types of school (Government/Private) is rejected. So emotional intelligence has a significant effect on the student's cognitive difficulty and academic achievement of students. The p value is less than alpha 0.05 level of significance which shows that emotional intelligence determines the cognitive difficulty and academic achievement of students. So it displays that emotional intelligence has a positive significant effect on cognitive difficulty and academic achievement of both government and private school students.

(K)



**Table No.4.12: Tests of Between-Subjects Effects of hypothesis there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to types of school (government/private).**

**Table No. 4.12: Tests of Between-Subjects Effects**

Types of School	Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Government	Corrected Model	Cognitive Difficulty	4581.270 <sup>a</sup>	3	1527.090	103.832	.000
		Academic Achievement	145946.997 <sup>b</sup>	3	48648.999	38.694	.000
	Intercept	Cognitive Difficulty	1111641.098	1	1111641.098	75583.940	.000
		Academic Achievement	2555070.927	1	2555070.927	2032.233	.000
	Emotional Intelligence Categorical	Cognitive Difficulty	4581.270	3	1527.090	103.832	.000
		Academic Achievement	145946.997	3	48648.999	38.694	.000
	Error	Cognitive Difficulty	1706.055	116	14.707		
		Academic Achievement	145843.595	116	1257.272		
	Total	Cognitive Difficulty	3456969.000	120			
		Academic Achievement	10048483.000	120			
	Corrected Total	Cognitive Difficulty	6287.325	119			
		Academic Achievement	291790.592	119			

Private	Corrected Model	Cognitive Difficulty e	3443.382 <sup>c</sup>	3	1147.794	88.381	.000
		Academic Achievement	99211.566 <sup>d</sup>	3	33070.522	103.128	.000
	Intercept	Cognitive Difficulty	801510.342	1	801510.342	61716.653	.000
		Academic Achievement	1659408.200	1	1659408.200	5174.721	.000
	Emotional Intelligence Categorical	Cognitive Difficulty	3443.382	3	1147.794	88.381	.000
		Academic Achievement d	99211.566	3	33070.522	103.128	.000
	Error	Cognitive Difficulty	1506.485	116	12.987		
		Marks Obtained	37198.401	116	320.676		
	Total	Cognitive Difficulty	3478392.000	120			
		Academic Achievement	8228662.000	120			
	Corrected Total	Cognitive Difficulty	4949.867	119			
		Academic Achievement	136409.967	119			

a. R Squared = .729 (Adjusted R Squared = .722)

b. R Squared = .500 (Adjusted R Squared = .487)

c. R Squared = .696 (Adjusted R Squared = .688)

d. R Squared = .727 (Adjusted R Squared = .720)

From the above table, it is demonstrated that the difference in cognitive scores between different levels of Emotional Intelligence as well as marks obtained scores between different levels of Emotional Intelligence differ statistically in both government and private school students (p-values for Cognitive Difficulty and Academic Achievement are less than 0.05 level of significance). So the hypothesis stated that there will be no significant Impact of Emotional Intelligence on Cognitive Difficulty and Academic Achievement of Higher Secondary Students with reference to their types of school ((government/private) is rejected.

(L)

