CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA AND INTERPRETATION OF RESULT

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PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

After discussing the environmental awareness and eco-friendly behaviour and taking a brief review of researches conducted in this area to support the rational of the present study detailed plan of the study was presented in the third chapter.

The data thus collected was subjected to appropriate statistical procedure to test the hypotheses with which this study was initiated. The details of the statistical technique employed for analysis of data, results obtained through this analysis and the decisions regarding the rejection and non-rejection of hypothesis are presented in this chapter. Statistic is a body of mathematical techniques or processes for gathering, organizing, analysing and interpreting numerical data. Since research yields such quantitative data, statistics is a basic tool of measurement, evaluation, and research. The word statistics is something used to describe the numerical data that we gathered. Statistical data describes group behaviour or group characteristics abstracted from a number of individual observations, which are combined to make generalization possible. The researcher who uses statistics is concerned with more that the manipulation of data. Statistical methods go to the fundamental purposes of description and analysis. By statistic we can analyse and interpret the data and can draw conclusion.

Interpretation of data refers to that important part of the investigation, which is associated with the drawing of inferences from the collected facts after

analytical study. It is extremely useful and important part of the study because it makes possible use of collected data. Statistical facts by themselves have no utility; it is interpretation that makes it possible for us to utilize collected data in various field of activity.

4.2 ANALYSIS OF DATA

Analysis of data is done according to objectives/hypothesis.

OBJECTIVE-1

To study the current level of environmental awareness of secondary school students.

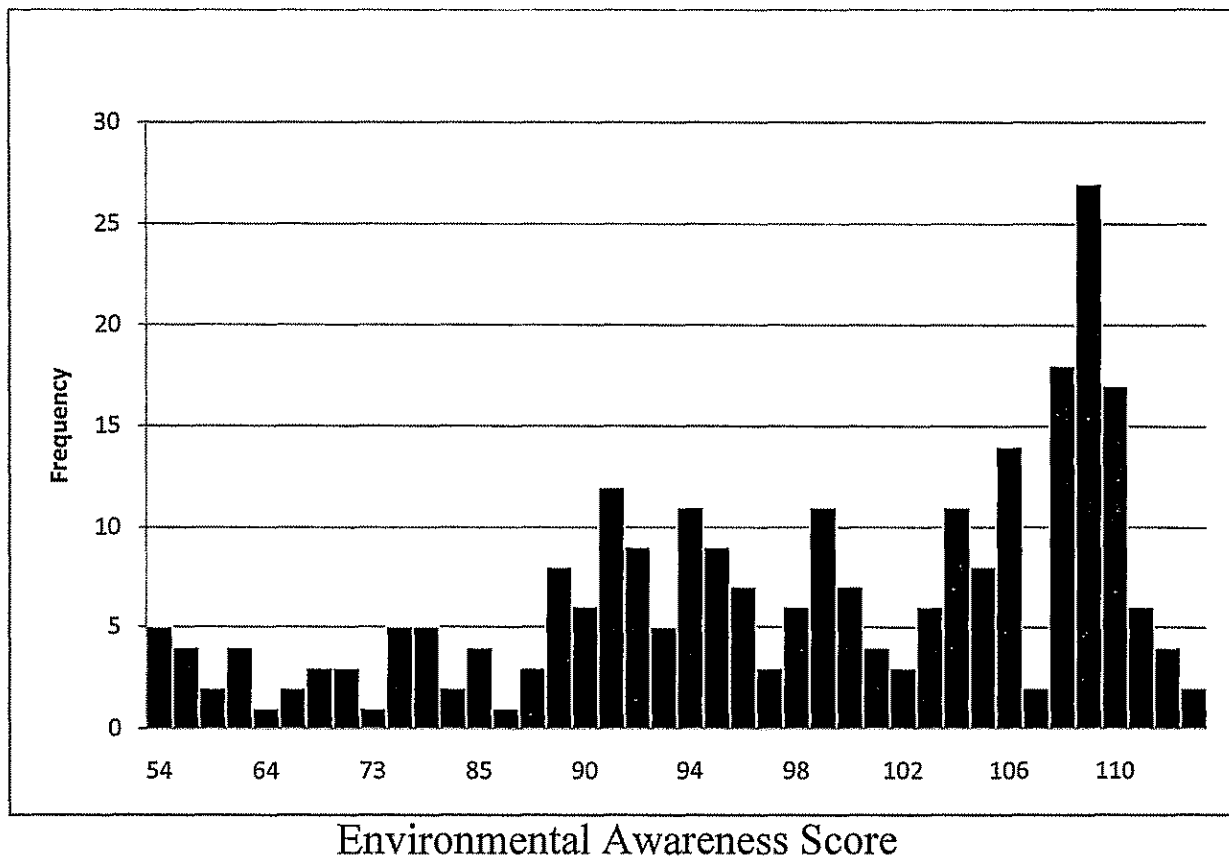For this objective percentage and cumulative percentage are used.

Table-4.2.1

Frequency distribution of environmental awareness scores

Environmental awareness score	Frequency	Percentage	Cumulative percentage
54	5	1.78	1.78
59	4	1.42	3.2
61	2	0.71	3.91

Environmental awareness score	Frequency	Percentage	Cumulative percentage
63	4	1.42	5.33
64	1	0.35	5.68
65	2	0.71	6.39
68	3	1.07	7.46
71	3	1.07	8.53
73	1	0.35	8.88
75	5	1.78	10.66
81	5	1.78	12.44
83	2	0.71	13.15
85	4	1.42	14.57
87	1	0.35	15.92
88	3	1.07	16.99
89	8	2.85	19.84
90	6	2.14	21.98
91	12	4.28	26.26
92	9	3.21	29.47
93	5	1.78	31.25
94	11	3.92	35.17
95	9	3.21	38.38
96	7	2.5	40.88
97	3	1.07	41.95
98	6	2.14	44.09

Environmental awareness score	Frequency	Percentage	Cumulative percentage
99	11	3.92	48.01
100	7	2.5	50.51
101	4	1.42	51.93
102	3	1.07	53.00
103	6	2.14	55.14
104	11	3.92	59.06
105	8	2.85	61.91
106	14	5	66.91
107	21	7.5	74.41
108	18	6.42	80.83
109	27	9.64	90.48
110	17	6.07	96.55
111	6	2.14	97.87
112	4	1.42	99.29
113	2	0.71	100
	280	100.0	

Graphical representation of scores obtained by students on environmental awareness scale (Graph-4.2.1)

Table- 4.2.2

Levels of eco-friendly behaviour of students

Environmental Awareness Score	Number of Students	Total number of students	Percentage
50-75	30	280	10.7
76-99	102	280	36.4
100-117	148	280	52.85

From the above table, following findings have been arrived at: Out of 280 students 30 students have scored between 50 to 75 marks, 102 students have scored between 76 to 99, and 148 students have scored between 100 to 117 marks on environmental awareness scale. This indicates that secondary school students have high level of environmental awareness.

OBJETIVE-2

To study the current level of eco-friendly behaviour of secondary school students

Table-4.2.3

Frequency distribution of eco-friendly behaviour scores

Eco-friendly behaviour score	Frequency	Percentage	Cumulative Percentage
31	2	0.71	0.71
34	1	0.35	1.06
35	2	0.71	1.77
37	2	0.71	2.48
38	2	0.71	3.19
39	9	3.21	6.40

Eco-friendly behaviour score	Frequency	Percentage	Cumulative Percentage
40	22	7.85	14.25
41	10	3.57	17.82
42	19	6.78	24.6
43	25	8.92	33.52
44	7	2.5	36.02
45	12	4.28	40.3
46	8	2.85	43.15
47	20	7.14	50.29
48	15	5.35	55.64
49	19	6.78	62.42
50	21	7.50	69.92
51	22	7.85	77.77
52	17	6.07	83.84
53	15	5.35	89.19
54	12	4.28	93.47
55	3	1.07	94.54
56	2	0.71	95.25
57	7	2.5	97.75
58	4	1.42	99.29
59	2	0.71	100
	280	100.0	

Graphical representation of scores obtained by students on eco-friendly behaviour scale
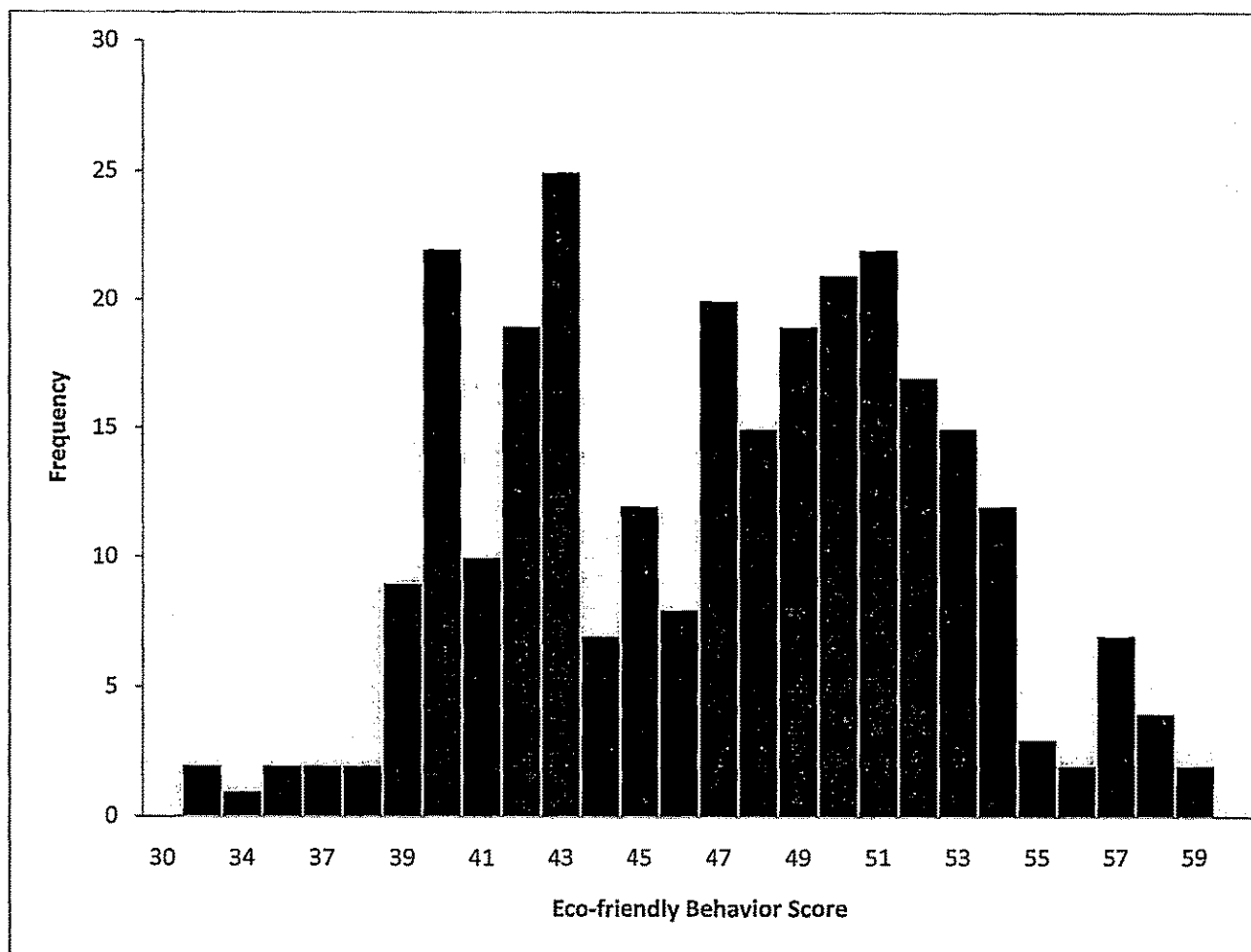
Graph- 4.2.2

Table-4.2.4

Levels of Eco-Friendly Behaviour

Environmental Awareness Score	Number of Students	Total number of students	Percentage
20-39	18	280	6.4
40-49	157	280	56.1
50-60	105	280	37.5

From the above table, following findings have been arrived at: Out of 280 students 18 students have scored between 20 to 39 marks, 157 students have scored between 40 to 59, and 105 students have scored between 50 to 60 marks on eco-friendly behaviour scale. This indicates that secondary school students have average eco-friendly behaviour.

4.3 ANALYSIS OF HYPOTHESES

HYPOTHESIS -1

There is no significant relationship between environmental awareness and eco-friendly behaviour of secondary schools.

Pearson product moment correlation (r) is used to test the hypothesis, value of r shown in table 4.3.1

Table -4.3.1

Showing co-relation coefficient between environmental awareness and eco-friendly behaviour

Variables	Number of students	df	'r'
Environmental awareness	280	278	0.21*
Eco-friendly behaviour	280		

*value of 'r' is significant at 0.01 level.

Table 4.3.1 shows that for the 278 degree of freedom computed value of 'r' is 0.21 and the table value of 'r' is 0.182 at 0.01 level of significance. The computed value of 'r' is greater than the table value of 'r' at 0.01 level.

Hence the null hypothesis is "rejected." This indicates that there is a significant relationship between environmental awareness and eco-friendly behaviour of secondary school students.

HYPOTHESIS -2

There is no significant difference in environmental awareness between boys and girls of secondary school.

t-test is used to test the hypothesis, value of t shown in table 4.3.2

Table 4.3.2

Comparison of levels of environmental awareness for gender

Variables	Gender	Number	Mean	S.D.	't'	df
Environmental awareness	Girls	140	98.30	13.23	0.16*	278
	Boys	140	96.02	14.28		

*value of 't' is not significant at 0.01 level.

Table 4.3.2 shows that for the 278 degree of freedom computed value of 't' is 0.16 and the table value of 't' is 2.58 at 0.01 level of significance. The computed value of 't' is smaller than the table value of 't' at 0.01 level.

Hence the null hypothesis is not rejected. This indicates that there is no significant difference in environmental awareness between boys and girls of secondary schools.

This result is similar to the research findings of Bhattacharya G.C.(1996)

HYPOTHESIS -3

There is no significant difference in eco-friendly behaviour of boys and girls of secondary schools.

t-test is used to test the hypothesis. Value of t is shown in table 4.3.3

Table 4.3.3

Comparison of levels of eco-friendly behaviour for gender

Variables	Gender	Number	Mean	S.D.	't'	df
Eco-friendly behaviour	Girls	140	47.18	5.55	0.58*	278
	Boys	140	46.82	5.35		

*value of 't' is not significant at 0.01 level.

Table 4.3.3 shows that for the 278 degree of freedom computed value of 't' is 0.58 and the table value of 't' is 2.58 at 0.01 level of significance. The computed value of 't' is smaller than the table value of 't' at 0.01 level.

Hence the null hypothesis is not rejected. This indicates that there is no significant difference in eco-friendly behaviour between boys and girls of secondary schools.

HYPOTHESIS -4

There is no significant relationship between science achievement and environmental awareness.

Pearson product moment correlation (r) is used to test the hypothesis; value of r is shown in the table 4.3.4

Table 4.3.4

Table showing the co-relation coefficient between environmental awareness and science achievement

Variables	Numbers	df	'r'
Environmental awareness	280	278	0.60*
Science achievement	280		

*value of 'r' is significant at 0.01 level.

Table 4.3.4 shows that for the 278 degree of freedom computed value of 'r' is 0.60 and the table value of 'r' is 0.182 at 0.01 level of significance. The computed value of 'r' is greater than the table value of 'r' at 0.01 level. Hence the null hypothesis is "rejected." This indicates that there is a significant relationship between environmental awareness and science achievement of secondary school students.

HYPOTHESIS -5

There is no significant relationship between science achievement and eco-friendly behaviour of secondary school students

Pearson product moment correlation (r) is used to test the hypothesis; value of r is shown in table 4.3.5

Table-4.3.5

Table showing co-relation coefficient between eco-friendly behaviour and science achievement of secondary school students

Variables	Numbers	df	'r'
Eco-friendly behaviour	280	278	0.52*
Science achievement	280		

*value of 'r' is significant at 0.01 level.

Table 4.3.5 shows that for the 278 degree of freedom computed value of 'r' is 0.60 and the table value of 'r' is 0.182 at 0.01 level of significance. The computed value of 'r' is greater than the table value of 'r' at 0.01 level. Hence the null hypothesis is "rejected." This indicates that there is a significant relationship between environmental awareness and science achievement of secondary school students.