

CHAPTER- IV

DATA ANALYSIS AND INTERPRETATION

4.0 INTRODUCTION

Data analysis and interpretation is the next stage after collecting data from empirical methods when the data has been collected, it is essential to organize that for interpretation and presentation. Data interpretation refers to the process of using diverse analytical methods to review data and arrive at relevant conclusions. The interpretation of data helps researchers to categorize, manipulate, and summarize the information in order to answer critical questions. The importance of data interpretation is evident and this is why it needs to be done properly. Data is very likely to arrive from multiple sources and has a tendency to enter the analysis process with haphazard ordering. Data analysis tends to be extremely subjective. That is to say, the nature and goal of interpretation will vary from business to business, likely correlating to the type of data being analyzed. While there are several types of processes that are implemented based on individual data nature, the two broadest and most common categories are “quantitative and qualitative analysis”.

Qualitative data may have to be summarized and quantitative data may have to be treated statistically to make their significance clear” (Oliver, 1930). In the previous chapter, a description of the problem, a review of related literature, descriptions of tools and procedure for data collection have been presented. The data collected through the use of mentioned tests and scales would have remained merely a meaningless heap of facts unless it had not been statistically processed and analyzed. Analysis of data means studying the tabulated material in order to determine the present facts of means. It involves breaking up the complex factors into simpler parts and putting the parts together in a new agreement for the purpose of interpretation. According to Kerlinger (1964), “Analysis means categorizing, ordering, manipulating and summarizing of data to obtain an answer to research questions. The purpose of the analysis is to reduce data into the intelligible and interpretable form so that the relation of research problems can be studied and test. Analysis of data can be done on the basis of hypotheses set earlier.” Pauling (1956) said, “Scientific analysis assesses that behind the accumulated data, there is something more important revealing than facts themselves. By this process, old conceptions can be tested and a new one can be discovered. Interpretation is the most important step in the total research process. It calls for a critical examination of the results of one’s analysis in light of all the limitations of the data gathered. According to

Good, Barr and Scates (1941), “The process of interpretation is essentially one of stating what the results show? What do they mean? What is its significance? What is the answer to the original problem? That is all the limitations of the data must enter into and become a part of the interpretation of the results.” According to Shukla (1996), “barefacts, objectives, and data never determine anything. They become significant only as interpreted in the light of accepted standards and assumptions. In ordinary life, we seldom deal with bare facts interpreted. This interpretation is determined by the purpose to which, we related the facts.”

4.1 ANALYSIS AND INTERPRETATION OF DATA

The main objective of the current research is to study the academic achievement in relation to self-efficacy among class XII Students studying vocational subjects, Bhopal district In the present study self-efficacy is the independent variable and academic achievement is dependent variable. This chapter deals with the analysis and interpretation of data, along with the discussion of there results.

TO STUDY THE SELF-EFFICACY OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECT

To test the hypothesis, Mean, SD, ‘t’ value, df and level of significance of the self-efficacy scores were calculated. The results are presented in **Table 4.1**

Table : 4.1

SHOWING MEAN AND S.D. OF SELF –EFFICACY OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECTS

SR NO.	GROUPS	N	MEAN	SD	t value	Df
1	BOYS	30	74.03	9.95	0.196	58
2	GIRLS	30	77.77	7.91		
	TOTAL	60	75.54	8.93		

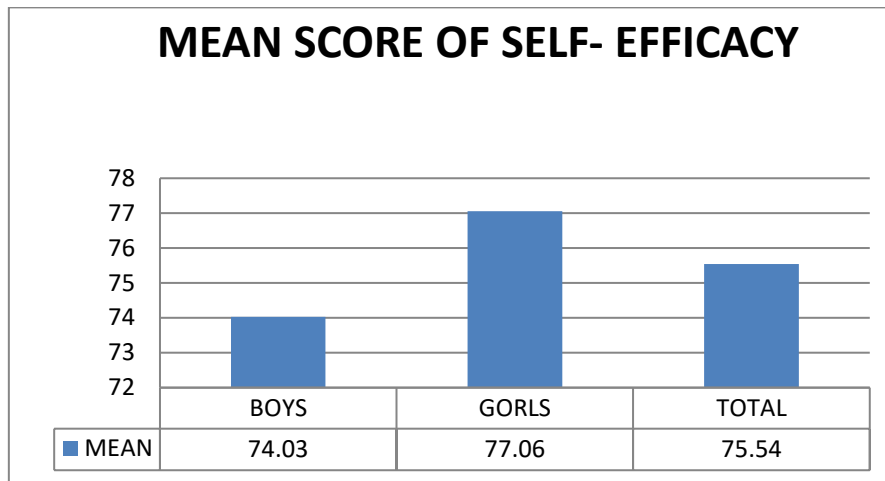


Fig 4.1 Mean score of self – efficacy of boy and girl students of class XII studying vocational subjects

Interpretation:

From the fig 4.1 indicates that mean score of self –efficacy of boy and girl students of class XII studying vocational subjects. The mean score of boy students are 74.03 and girl students are 77.06 and total score of self- efficacy is 75.54 . From the table 4.1 indicates that the t-value of self – efficacy is 0.196, which is not significant at 0.05 level with degree of freedom 58. Therefore, the null hypothesis is accepted. Therefore, the self-efficacy score of boy and girl students do not differ significantly.

TABLE 4.2: PERCENTAGE OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECTS IN HIGH, AVERAGE AND LOW SELF – EFFICACY CATEGORY

GROUPS	N	HIGH SELF-EFFICACY (85)	AVERAGE SELF-EFFICACY(74-84)	LOW SELF-EFFICACY (>74)
BOYS	30	16.66% (5)	30.00% (9)	53.33% (16)
GIRLS	30	13.33% (4)	53.33% (16)	33.33% (10)
TOTAL	60	15%	41.66%	43.33%

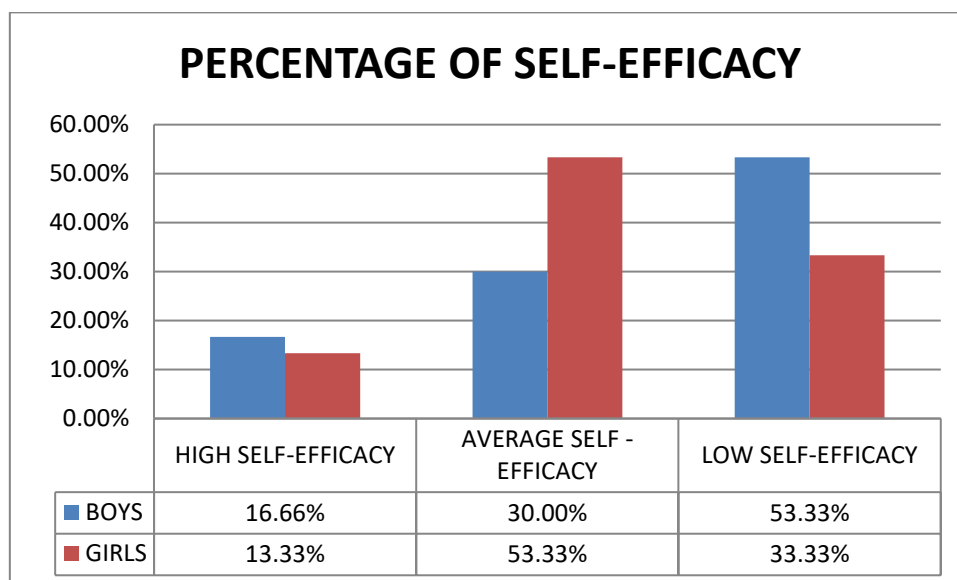


Fig 4.2 Bar diagram showing mean score of self-efficacy of boy and girl students of class XII studying vocational subjects

Interpretation :

From fig. 4.2 indicates the bar diagram of the percentage of mean score of self-efficacy of boy and girl students of class XII studying vocational subjects. From the table 4.2 reveals that the self-efficacy of boy and girl students of class XII studying vocational subjects. 66.16% boy students have 13.33% and girl students have high self-efficacy, 30.00% boy students and 53.33% girl students have Average self-efficacy and 53.33% boy students and 33.33% girl students have low self-efficacy.

TO STUDY THE ACADEMIC ACHIEVEMENT OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECT

TABLE 4.3 SHOWING MEAN AND SD OF ACADEMIC ACHIEVEMENT BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECT

SR NO	GROUPS	N	MEAN	SD	t value	Df
1	BOYS	30	56.16	12.23	0.894	58
2	GIRLS	30	56.66	16.44		
	TOTAL	60	56.14	14.33		

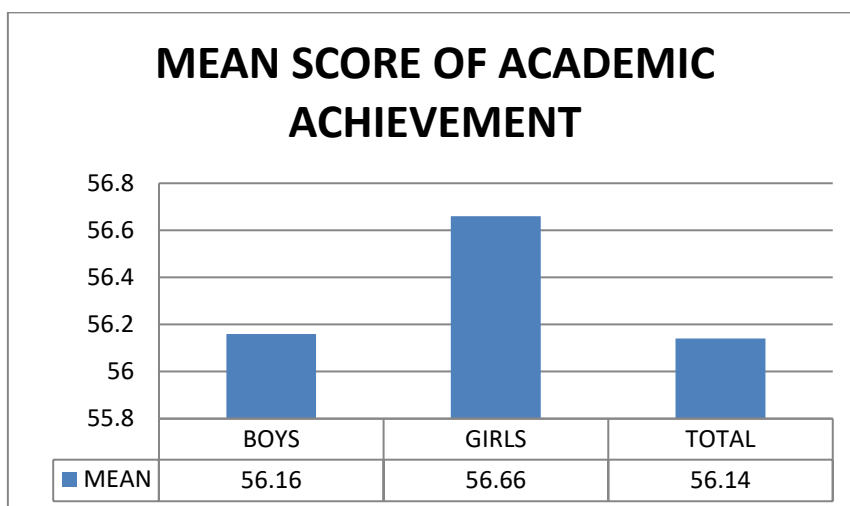


Fig 4.3 Bar diagram showing mean score of academic achievement of boy and girl of class XII students studying vocational subjects

Interpretation:

From the fig 4.3 indicates that the mean score of academic achievement of boy and girl students of class XII studying vocational subjects. The mean score of boy students are 56.16 and girl students are 56.66 and total score of academic achievement is 56.41

From the table 4.3 indicates that the t value of academic achievement is 0.894 which is not significant at 0.05 level with degree of freedom 58. Therefore, the null hypothesis is accepted..

TABLE 4.4 PERCENTAGE OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECTS IN HIGH, AVERAGE AND LOW ACADEMIC ACHIEVEMENT CATEGORY

GROUPS	TOTAL	HIGH ACADEMIC ACHIEVEMENT (<76)	AVERAGE ACADEMIC ACHIEVEMENT (55-75)	LOW ACADEMIC ACHIEVEMENT (>55)
BOYS	30	10% (3)	46.6% (14)	43.3% (13)
GIRLS	30	16.6% (5)	33.3% (10)	50% (15)
TOTAL	60	13.33%	40%	46.66%

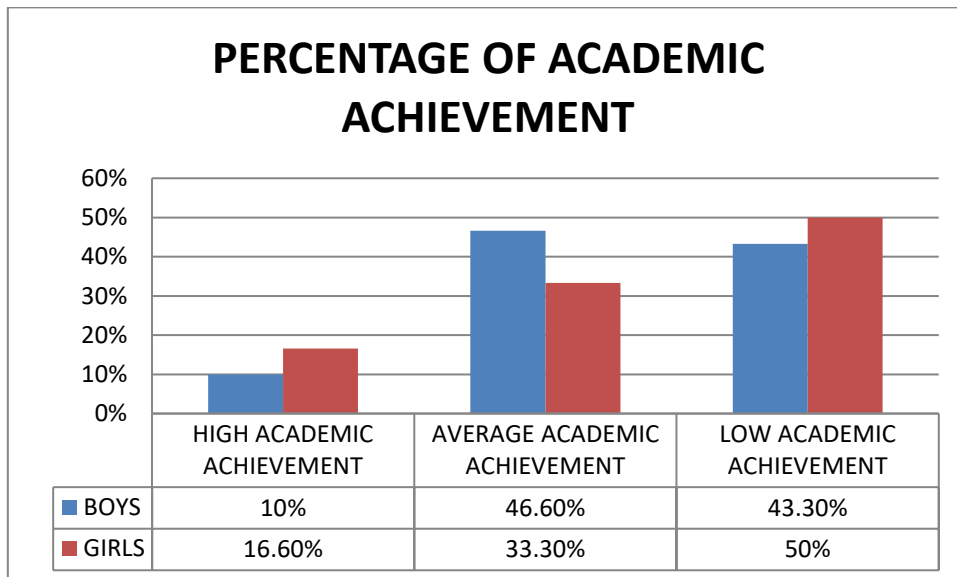


Fig 4.4 Bar diagram showing percentage of academic achievement of boy and girl students of class XII studying vocational subjects

Interpretation:

From the fig. 4.4 indicates that the bar diagram of percentage of academic achievement of boy and girl students of class XII studying vocational subjects.

From the table 4.4 reveals that the academic achievement of boy and girl students of class XII studying vocational subjects. 10% boy students and 16.60% girl students have high academic achievement, 46.60% boy students and 33.30% girl students have average academic achievement and 43.30% boy students and 50% girl students have low academic achievement.

TO STUDY THE RELATIONSHIP BETWEEN SELF-EFFICACY AND ACADEMIC ACHIEVEMENT OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECT

TABLE 4.5 SHOWING THE MEAN AND SD OF SEIF-EFFICACY AND ACADEMIC ACHIEVEMENT OF BOY AND GIRL STUDENTS OF CLASS XII STUDYING VOCATIONAL SUBJECT

Table 4.5

Sr. no.	SELF-EFFICACY		ACADEMIC AACHIEVEMENT	
	BOYS	GIRLS	BOYS	GIRLS
1	87	89	77	78
2	85	87	78	84
3	85	90	82	80
4	90	85	62	79
5	99	80	75	82
6	80	79	66	66
7	75	82	62	64
8	80	83	51	73
9	80	84	58	72
10	84	82	72	60
11	76	83	62	61
12	78	75	59	59
13	76	74	57	63
14	79	80	54	61
15	68	79	60	70
16	69	74	60	49
17	67	83	55	37
18	71	82	45	36
19	51	80	48	47
20	72	84	43	45
21	67	72	36	36
22	69	70	53	37
23	66	66	52	37
24	72	71	50	38
25	65	69	38	40
26	63	59	53	45
27	58	68	39	30
28	67	65	54	46
29	70	66	44	45
30	72	71	40	50
Mean	74.03	77.77	56.16	56.66
SD	9.95	7.91	12.23	16.44

TABLE 4. 6 SHOWING THE CORRELATION BETWEEN SELF-EFFICACY AND ACADEMIC ACHIEVEMENT OF CLASS XII STUDENTS STUDYING VOCATIONAL SUBJECT

VARIABLES	GROUPS	CORRELATION	LEVEL OF SIGNIFICANT
SELF-EFFICACY	STUDENTS	0.663	Significant
ACADEMIC ACHIEVEMENT			

'r' value 0.040,table value 8.96 (at 0.01 level)

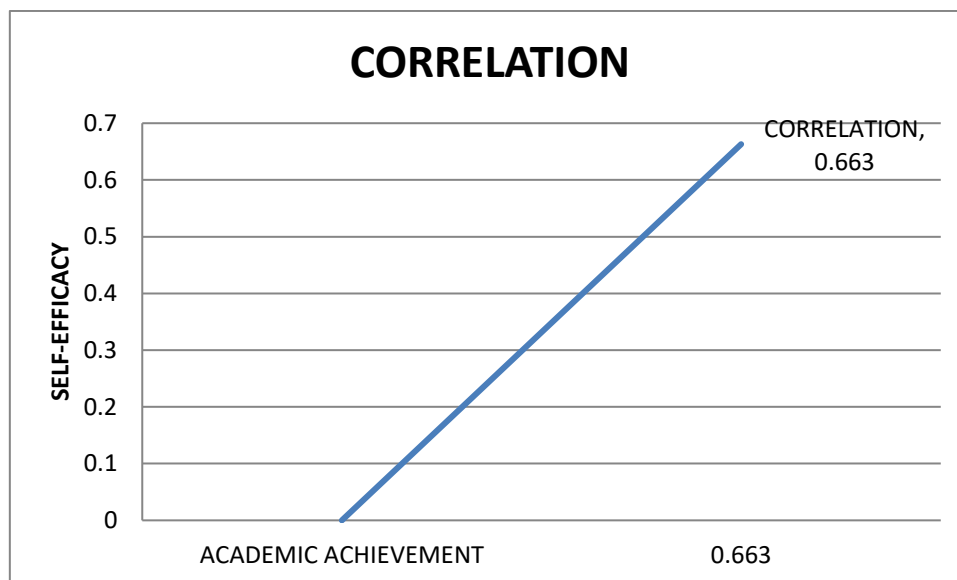


Fig 4.6 Line chart showing the correlation between the self-efficacy and academic achievement of class XII students studying vocational subjects

Interpretation-

From the fig 4.5 line chart indicates that the correlation between self -efficacy and academic achievement of class XII students studying vocational subjects. The correlation between self-efficacy and academic achievement is 0.663 which indicates that is moderate positive correlation. If self-efficacy increases, academic achievement will also increase, If self –efficacy is low academic achievement will also be low. Therefore, the null hypothesis is rejected. Therefore, the correlation between self-efficacy and academic achievement of boy and girl students do not differ significantly.