

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION



Data Interpretation

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4.0.0 INTRODUCTION

The need and justification, objectives along with the hypotheses of the study are presented under different headings in the chapter- I. The reviews of the related literature are presented in the chapter – II. The methodology, sample, design, tools and techniques, procedure of data collection and the statistical techniques used for the analysis of data are presented in chapter – III. In this chapter, objective-wise analysis of the data are presented, below, under separate headings.

4.1.0 TECHNIQUES USED IN DATA ANALYSIS:

In the present study the scores of two high school students on achievement motivation and their academic achievement of last examination in the terms of Mean, Standard Deviation, Correlation, t-test and ANOVA have been employed.

4.2.0 VERIFICATION OF THE HYPOTHESIS:

There are two hypotheses in the study, which has to be verified:

4.2.1 Correlation between achievement motivation and academic achievement

Pearson's correlation was worked out to find the relationship between Achievement Motivation and

Academic Achievement of X class students. The value of the correlation is given in the table 4.1 given below:

Table 4.1: Relationship between Achievement Motivation and Academic Achievement (N=90)

Variables	N	df	r	Significant
Achievement Motivation Academic Achievement	90	88	0.735	significant

**** Significant at the 0.01 level**

Table 4.1 reveals that the value of correlation between Achievement Motivation and Academic Achievement of X class students is 0.735 which is positive and significant at 0.01 level of significance. Hypothesis which states that there is no significant relationship between achievement motivation and academic achievement of X class students is, thus, rejected. Academic Achievement of class X students is significantly related to their Achievement Motivation. This indicates that both these variables affect each other.

This result is well supported by the studies conducted by Ahluwalia, 1985), Sandhu (2004), Muola (2010), Alam, (2001), Ellekka and Elankathir (2001), Sadar (2014).

4.2.2 ANOVA: to find out the effect of Achievement Motivation on Academic Achievement

One-way ANOVA was worked out to find that there is no significant difference between Achievement Motivation with Low, Medium and High level Achievement related to their Academic Achievement of X class students.

Table 4.2: Mean and S.D. of Academic Achievement Levels

Achievement Levels	Mean	S.D.	N
High	194.52	5.807	27
Average	187.73	4.577	49
Low	177.29	7.447	14
Total	188.14	7.760	90

Table 4.3: Results of ANOVA for the effect of Achievement Motivation on Academic Achievement

Sources of Variances	df	Sum of Squares	Mean of Square	F
Achievement Level	2	2755.973	1377.987	46.054**
Error	87	2603.149	29.921	
Total	89	3191209.000		

**** Significant at 0.01 level**

The results of analysis of variance given in Table 4.3 indicate that the obtained value of 'F' was greater than the tabulated value at 0.01 level of significance with df equal to 2/89. Hence, the F value is significant. So the null hypothesis that there is no significant difference between Achievement Motivation with Low, Medium and High level Achievement related to their Academic Achievement is rejected.

The study was in conformity with earlier studies done by Bong (2004), Dr. Thakur Kalpana, (2013), Fan and Zhang (2008), Kamble and Adsul (2009).

Table 4.4 Post-hoc (Scheffe)

Achievement Level	Comparison	Mean Difference	Std. Error
High	Average	6.78	1.311
	Low	17.23	1.802
Average	High	-6.78	1.311
	Low	10.45	1.658
Low	High	-17.23	1.802
	Average	-10.45	1.658

**** Significant at 0.05 level**

The post-hoc comparison of values between high, average and low indicate that there was a significant difference in mean of each of these pairs, high and low, high and average, low and average. Therefore, the null hypothesis, namely, "there is no significant difference between Achievement Motivation with Low, Medium and High level Achievement related to their Academic Achievement is rejected".

4.3.0 DISCUSSION OF THE FINDINGS

In conclusion it can be stated that the findings of the study is in agreement and refute with some of the findings obtained by other investigator in the same field.

The present study found that there is a relationship between achievement motivation and academic achievement. This indicates that both these variables affect each other. This findings is in accordance with the findings of Dr. Sandhu S.S. (2004) done research on Academic Achievement of Adolescents in relation to Achievement Motivation and Study Habits. In the

study of the Dr. Sandhu found that academic achievement could be affected by the achievement motivation.

Further another finding of the study, Ayub et al. (2010) studied that relationship between University student's achievement motivation, attitude and academic performance. The results indicated a positive significant correlation between student's attitude towards learning and achievement motivation and between student's attitude and academic achievement.

The present study also found that there is a significant difference between Achievement Motivation with Low, Medium and High level Achievement related to their Academic Achievement. This indicates that achievement motivation effected by different levels of academic achievement. This findings is in accordance of P.B. Kavyakishore, Surekha Ksheersagar (2014) conducted research on Achievement in Science of secondary school students in relation to achievement motivation. There is a significant difference in achievement in Science between IX standard students belonging to low and high levels of achievement motivation.