CHAPTER IV

ANALYSIS, INTERPRETATION OF DATA AND FINDINGS

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Statistical analysis is the mathematical process of gathering, organizing, analysing and interpreting the numerical data. Descriptive of particular group, Inferential Statistical Analysis leads to judgements about the whole population to which the sample at hand is presumed to be related.

Data is organized in arrays in ascending or descending numerical order. Data is often grouped into class-intervals so that analysis is simplified and characteristic more readily noted.

Measure of central tendency describes data in terms of sort of average measure of position spread or dispersion describes data in terms of relationship to a point of central tendency. The range deviation variences, percentile, sigma score and standard score and useful measures of position, spread or dispersion, measures of relationship describe the relationship of paired variables, quantified by a coefficient of correlation. The coefficient is useful in educational research in standardizing tests and in making predication of the data that is available.

In this study the descriptive and survey method was used to find out the Parent-Adolescent Relationship and its effect on Adolescent's Academic Achievement. The Family Relationship Inventory was administered to the sample to know the feeling (attitude) of sample being Accepted, Concentrated or Avoided by his/her parents. A high score in each area was taken to calculate Means and SDs of the sample. The Means and SDs of the sample (Family Relationship Score) were compared with the means and SDs of the Family Relationship Inventory. There were some cases in each area - Acceptance, Concentration, and Avoidance - which in the scores for mother and father were equal. They were calculated in both areas. Sample was categorised into three groups based on their academic achievement score as high score, average score and low score. The normal probability curve was used for this purpose. For testing of hypothesis related to parent's attitude (Parent Acceptance, Parent Concentration, Parent Avoidance) three groups of sample were made according to their high, average and low attitude score.

For parent acceptance / concentration / avoidance, comparison of means of Academic Achievement score of three groups high/average/low based on the scores on FRI is done with the overall mean Academic Achievement score.

Table No. 4

The number of students in each pattern of parent attitude

Acceptance			Concentration			Avoidance		
M.A.	F.A.	Total	M.C.	F.C.	Total	M.V.	F.V.	Total
354	164	518	427	76	503	339	186	525

Table No.4 reveals that the largest score is for M.C. (Mother Concentration) indicating that the majority of students feel that their mother's concentration is more on them than other factors of Mother Acceptance and Mother Avoidance. It also indicates that very few students feel that their fathers concentrate on them. Regarding the pattern of acceptance of parents, it is found that majority of students feel that their mother accepts them more than their father. Regarding the pattern of avoidance more students feel that their mother avoids them more than their father.

Table No. 5

The groups of sample according to their academic achievement based on NPC Curve

Academic Achievement	Percentage	Number of students in each group
High	59 and above	75
Average	42.32 to 59.24	318
Low	0 to 42.31	79

The above Table reveals that there are little more

students in the low academic achievement group rather than high academic achievement groups.

Table No. 6

Three groups of sample according to high, average and low attitude score in Acceptance, Concentration and Avoidance pattern of parents

Attitude Group	Acceptance		Concentration		Avoidance	
	Score range	No.of students	Score range	No. of students	Score range	No.of students
High	(20-26)	218	14-19	188	14-21	26
Average	(14-20)	232	9-14	265	7-14	234
Low	(8-14)	22	4-9	19	1-7	212

In Table No. **6** for the parents acceptance, concentra-tion and avoidance scores, the scores on mother's and father's three patterns were considered. Based on the range of scores, three groups were made: High, Average and Low.

The table reveals that maximum number of students feel that their parents' concentration is average and least number of students feel that their parents' concentration towards them is low. Maximum number of students have stated that their parents' acceptance, concentration and avoidance are average. It is found as high as 218 students have stated that their parents' acceptance is high and as many as 212 students have stated

that their parents' avoidance is low.

Table No. 7

Comparison of the 'Family Relationship Score' (Means and SDs) of the sample with that of standard tool 'Family Relationship Inventory'.

Attitude	F.R. Inventory Standardized Student Sample N = 1064		F.R. Score Student Sample N = 472	
	Mean	**S.D.**	**Mean**	**S.D.**
M.A.	18.10	3.46	20.66	2.91
F.A.	19.94	4.71	20.15	2.97
P.A.	35.30	7.15	36.63	2.92
M.C.	15.72	2.68	14.81	2.95
F.C.	12.27	3.20	13.46	2.39
P.C.	23.30	5.34	25.49	2.98
M.V.	11.18	5.18	8.97	5.14
F.V.	13.65	6.83	7.8	3.80
P.V.	17.1	9.69	15.72	4.05

The above Table reveals that M.A., F.A. and P.A. are slightly higher than that of standardised averages.

Their variations within the scores are less than that of standardized variations. Average Mother Concentration does not show much difference with that of standardized average M.C. but average Father Concentration (F.C.) and Parent Concentration (P.C.) are slightly higher than that of standardized average F.C. and P.C.

Average Mother Avoidance (M.V.), Father Avoidance (F.V.) and Parent Avoidance (P.V.) shows slight decrease over that of standardized average M.V., F.V. and P.V. and also shows variations within the scores.

TESTING OF HYPOTHESES

(1) HYPOTHESIS No. 1

Ho

There is no significant effect of acceptance of mother on the adolescents academic achievement.

Table No. 8

Chi square test between mother acceptance and academic achievement at 0.05 level of significance

Area ⟶ Academic Achievement Group ↓	M.A.	M,NA	Total
High	52	23	75
Average	240	78	318
Low	62	17	79

M.A.: Mother Accepted

M.N.: Mother Not Accepted

A.A.Sc: Academic Achievement Score

Obtained x^2_c value = 1.8323

Since the obtained x^2_c value 1.8323 is less than the table value 5.991 at 0.05 level of significance, the above hypothesis is accepted. This implies that the two variables, acceptance of mother and adolescent's academic achievement, are independent of each other. In other words, there is no significant relationship between these two variables. There is no significant effect of acceptance of mother on the adolescent's academic achievement.

(2) HYPOTHESIS No. 2

   Ho

      There is no significant effect of acceptance of father on the adolescents academic achievement.

Table No.9

Chi square test between father acceptance and academic achievement at 0.05 level of significance

Area ⟶ Academic Achievement Group ↓	Father Accepted	Father Not Accepted	Total
High	33	42	75
Average	105	212	318
Low	25	54	79
Total:	164	308	472

Obtained x^2_c = 3.4476

Since the calculated x^2_c value 3.4476 is less than the table value 4.991 above hypothesis is accepted at 0.05 level of significance. This implies that the two tables acceptance of father and adolescent's academic achievement are independent of each other. In other words, there is no significant relationship between these two variables.

(3) HYPOTHESIS No. 3

    Ho

    There is no significant effect of acceptance of parents on the adolescents academic achievement.

Table No.10: Comparison of Means between Overall Academic Achievement and Parent Acceptance

Attitude Group	No.of students	Academic Achievement Score	Overall Academic Achievement Average Score
High	218	50.82	
Average	232	50.69	50.77
Low	022	46.45	

    The above Table reveals that high Parent Acceptance causes the slight improvement in their academic achievement. Low Parent Acceptance causes the significant decrease in their Academic Achievement.

    The average Parent Acceptance bas better scoring than that of Low Parent Acceptance student. That is because there is significant effect of Low Parent Acceptance over the Academic Achievement.

(4) HYPOTHESIS No. 4

Ho

There is no significant effect of concentration of mother on the adolescent§. academic achievement.

Table No. 11

Chi square test between mother concentration and adolescent's academic achievement

Average Adolescent's Academic Achievement Group	Mother's concentration	Mother Not concentrated	Total
High	70	5	75
Average	287	31	318
Low	70	9	19

Obysinrf c_c^2 value $= 1.0486$

x^2 table value $= 5.991$

$\therefore$ x^2 cal $< x^2$ table

Since the obtained x_c^2 value 1.0486 is less than the table value 5.991 at 0.05 level of significance, the above hypothesis is accepted. This implies that the two variables concentration of mother and academic achievement are independent. In other words, there is no significant effect of concentration of mother on the adolescent's academic achievement.

(5) HYPOTHESIS No. 5

Ho

There is no significant concentration of father on the adolescentS academic achievement.

Table No. 12

Chi square test between father concentration and academic achievement

Area ⟶ Academic Achievement Group ↓	Father Concentrated	Father Not Concentrated	Total
High	10	65	75
Average	50	268	318
Low	16	63	79

Obtained x^2_c value = 1.4672

x^2 table value = 5.991

$\therefore x^2$ cal $<$ x^2 table

Since the obtained x^2_c value 1.4672 is less than the table value 5.991 at 0.05 level of significance, the above hypothesis is accepted. This implies that the two variables, concentration of father and adolescent's academic achievement, are independent of each other. In other words, there is no significant effect of concentration of father on the adolescent's academic achievement.

(6) HYPOTHESIS No. 6

Ho

There is no significant effect of concentration of parents on the adolescentS , academic achievement.

Table No. 13: Comparison of Meansbetween Overall Academic Achievement and Parent Concentration

Attitude Group	No. of students	Academic Achieve- ment Average	Overall Academic Achievement Average
High	188	50.59	
Average	265	50.57	50.77
Low	19	50.51	

From the above Table it is seen that high parent concentration causes a slight decrease in student's academic achievement.

Low parent concentration causes a slight decrease in their academic achievement.

The high parent concentration students have better scoring than that of low parent concentration, but in a little measure, that is, there is no significant effect of parent concentration on the adolescent's academic achievement.

(7) HYPOTHESIS No. 7

Ho

There is no significant effect of avoidance of mother on the adolescents academic achievement.

Table No. 14

Chi square test between mother avoidance and academic achievement

Area ⟶ Academic Achievement Group	Mother Avoided	Mother Not Avoided	Total
High	54	21	75
Average	227	91	318
Low	58	21	79

Obtained x^2_c value = 0.13043

x^2 table value = 5.991

$\therefore x^2_c < x^2$ table value

Since the obtained x^2 value 0.13043 is less than the table value 5.991 at 0.05 level of significance, the above hypothesis is accepted. This implies that the two variables, viz., avoidance of mother and adolescent's academic achievement are independent of each other. In other words, there is no significant effect of avoidance of mother on the adolescent's academic achievement.

(8) HYPOTHESIS No. 8

Ho

There is no significant effect of avoidance of father on the adolescents: academic achievement.

Table No. 15

Chi square test between father avoidance and academic achievement

Area ⟶ Academic Achievement Group	Father Avoided	Father Not Avoided	Total
High	27	48	75
Average	127	191	318
Low	32	47	79

Obtained x^2_c value 0.4423

x^2 table value $=$ 5.991

x^2_c value$<x^2$ table value

$\therefore$ Ho is accepted.

Since the obtained x^2_c value 0.4423 is less than the table value 5.991 at 0.05 level of significance, the above hypothesis is accepted. This implies that, the two variables, viz., avoidance of father and adolescent's academic achievement are independent of each other. So, there is no significant effect of avoidance of father on the adolescent's academic achievement.

(9) HYPOTHESIS No. 9

Hc

There is no significant effect of avoidance of parents on the adolescentS. academic achievement.

Table 16: Comparison of Means between Overall Academic Achievement and Parent Avoidance

Area → Attitude ↓	No. of students	Academic Achievement Score Average	Overall Academic Achievement Score Average
High	26	44.82	
Average	234	50.45	50.77
Low	212	51.38	

From the above table it is revealed that high parent avoidance causes significant decrease in academic achievement.

Low parent avoidance causes slight improvement in academic achievement.

The average parent-avoidance students have better scoring than high parent-avoidance.

The low parent avoidance students have better scoring than high parent-avoidance students, that is, there is significant effect on high parent-avoidance over the academic achievement.

FINDINGS OF THE STUDY

(1)   The relationship between acceptance of mother and
        the adolescent's academic achievement is not found
        to be significant. Therefore, the null hypothesis
        "there is no significant effect of acceptance of
        mother on the adolescent's academic achievement"
        is accepted.

(2)   The relationship between acceptance of father and
        the adolescent's academic achievement is not found
        to be significant. Therefore, the null hypothesis,
        "there is no significant effect of acceptance of
        father on the adolescent's academic achievement"
        is accepted.

(3)   The high parent acceptance causes the slight
        improvement in adolescent's academic achievement.
        Low parent acceptance causes the significant
        decrease in adolescent's academic achievement. The
        average parent acceptance enables the students to
        score better than that of low parent acceptance.
        That is, there is significant effect of low parent
        acceptance   on   the   adolescent's   academic
        achievement.

(4)   The relationship between concentration of mother
        and the adolescent's academic achievement is not

found to be significant. The null hypothesis that there is no significant effect of concentration of father on the adolescent's academic achievement is accepted.

(5)   The relationship between concentration of father and the adolescent's academic achievement is not found to be significant. Therefore the null hypothesis that there is no significant effect of concentration of father on the adolescent's academic achievement is accepted.

(6)   High parent concentration causes the slight decrease in student's academic achievement. Low parent concentration causes the slight decrease in their academic achievement. The high parent concentration enables the adolescents to score better than that of low parent concentration but, to a limited extent; so, the hypothesis that there is no significant effect of concentration of parents on the adolescent's academic achievement is accepted.

(7)   The relation between avoidance of mother and the adolescent's academic achievement is not found to be significant. The null hypothesis that there is no significant effect of avoidance of mother on

the adolescent's academic achievement is accepted.

(8)   The relation between avoidance of father and
        adolescent's academic achievement is not found to
        be significant. Therefore, the null hypothesis
        that there is no significant effect of avoidance
        of father on the adolescent's academic achievement
        is accepted.

(9)   High parent avoidance causes significant decrease
        in adolescent's academic achievement. Low parent
        avoidance causes slight improvement in their
        academic achievement. The average parent avoidance
        students have scored better than high parent
        avoidance. The low parent avoidance students have
        better scoring than high parent avoidance
        students. That is, there is significant effect of
        high parent avoidance on the adolescent's academic
        achievement.