CHAPTER-5
CONCLUSIONS AND SUGGESTIONS

Upto this point the investigator has collected the relevant data from the field and collated and tabulated it. However, the data presented in the tabular form serves very little purpose. For drawing valuable inferences from it, the data need be processed and treated with the help of appropriate statistical tools and techniques. Consequently, two prominent statistical techniques viz., t-test and analysis of variance, were applied for analyzing the data in the previous chapter. Accordingly this chapter is divided into two parts first dealing with the hypotheses of the main effects while the second relates to the hypotheses of interaction effects.

In the present chapter, the researcher has focused on drawing population estimates from sample statistics. On the basis of sample-statistics analysed and interpreted in the foregoing chapter, the researcher has drawn the following conclusions and generalizations and has given the suggestions accordingly.

5.1 TESTING OF HYPOTHESES PERTAINING TO MAIN EFFECTS OF INDEPENDENT VARIABLES

The present section is devoted to the testing of hypotheses pertaining to the main effects of the three independent variables (need achievement, academic achievement and intelligence) on the dependent
variable (frustration). As has been noted earlier, the statistical technique of t-test has been applied to measure the main effect of the independent variables on frustration of male sample, female sample and the total sample and the following main inferences have been drawn on that basis.

1. In the previous chapter, the investigator studied the significance of difference in frustration levels of adolescent boys and girls with the help of statistical technique of t-test. On the basis of analysis of data thereat, it was found that the t-value was -1.26, which was statistically not significant (.209) at any of the two levels of significance (Table-4.1). This indicates that there does not exist any significant difference in the levels of frustration of the boys and girls.

   Therefore, the first null hypothesis of the study “there is no significant difference in frustration levels of adolescent boys and girls” stands proved.

2. It was also studied in the previous chapter whether there exist any significant difference in frustration at different levels of need achievement of male sample. Results of the t-test applied on this sample are presented in Table-4.2. This table reveals that t-value is -11.13, which was found to be highly significant at .01 level and, therefore, it can be stated that there exist significant difference in the frustration of male students at different levels need achievement.
From the table it was also observed that the mean value for high need achievement was higher in comparison to low need achievement. This implied that there is an intimate relationship between need achievement and frustration on the male students.

Hence, the second hypothesis of the study "there is no significant difference in frustration at different levels of need achievement of adolescent boys" stands disproved.

3. T-test was also applied to study the significance of difference in frustration at different levels of need achievement of the female sample. From the results of t-test on this sample (contained in Table-4.3 of the previous chapter), it is observable that the t-value is -12.24, which is statistically highly significant at .01 level. Therefore, in the case of female students also, it may be observed that there is significant difference of low and high need achievement on the dependent variable frustration. In so far as the mean value for different levels of need achievement is concerned it is obvious from the said table that the mean value for high need achievement is higher in comparison to low need achievement. This means that the female students having high need achievement are more frustrated in comparison to those female students who have low need achievement.
Thus, the third null hypothesis of the study "there is no significant difference in frustration at different levels of need achievement of adolescent girls" stands disproved.

4. The significance of difference in frustration at different levels of need achievement on total sample was also observed in the previous chapter. Results of t-test on this sample are expressed in Table-4.4, which shows that the t-value on the total sample was -16.30, which is statistically highly significant at .01 level. Hence, it may be again safely concluded that the there is significant difference of low and high need achievement on the dependent variable frustration in the case of total sample as well.

Moreover, the mean value for high need achievement is higher in comparison to low need achievement. This shows that (like the male and female samples taken individually, the total male and female sample taken together) there exists a close relationship between the independent variable and the dependent variable.

Therefore, the fourth hypothesis of the study "there is no significant difference in frustration at different levels of need achievement of adolescent boys and girls" stands rejected.

5. One of the main relationships studied in the previous chapter was that of frustration of the male students at different levels of academic achievement. Table-4.5 contains the results of t-test on this sample and it shows that given the degree of freedom 298, the t-value is 10.46, which is
statistically highly significant at .01 level. Hence, it may be concluded that the there is significant difference of low and high academic achievement of the male students on the dependent variable frustration.

The table also reveals that the mean value for low Academic Achievement is higher in comparison to high Academic Achievement from which it is evident that there exists a negative relationship between academic achievement and frustration in so far as the male students are concerned.

Hence, the fifth hypothesis of the study “there is no significant difference in frustration at different levels of academic achievement of adolescent boys” again stands disproved.

6. Significance of difference of the effect of frustration on academic achievement of the female sample was also studied in the previous chapter the results of which are presented in Table-4.6. This table divulges that the t-value on female sample is 5.79, which is once again statistically highly significant at .01 level. The table further reveals that the mean value for low academic achievement is higher in comparison to high academic achievement. Hence, in the case of female students also, it may be concluded that those female students who have low academic achievement are more frustrated in comparison to their those counterparts who have high academic achievement.
Consequently, the sixth hypothesis of the study “there is no significant difference in frustration at different levels of academic achievement of adolescent girls” could not be proved.

7. In the previous chapter, the investigator tried to explain the relationship between frustration and the independent variable academic achievement on the total sample. The t-test on this sample shows that the t-value is 10.95, which is statistically highly significant at .01 level. This means that there is significant difference of different levels of academic achievement on frustration of total sample (Table-4.7).

Moreover, the mean value for high academic achievement is greater than for low academic achievement. This establishes a negative relationship between the independent variable academic achievement and the dependent variable frustration of the total sample. This means that like the male and female samples taken individually, the total sample (male and female students taken together) register the same opposite trend i.e., those students who have low academic achievement are more frustrated in comparison to those students having high academic achievement.

Obviously, therefore, the seventh hypothesis of the study “there is no significant difference in frustration at different levels of academic achievement of adolescent girls” could also not be proved.
8. T-test was also applied to study the significance of difference of low and high levels of intelligence on the dependent variable frustration of the male sample in the last chapter and the results on this sample are given in Table-4.8. This table shows that the t-value for this sample is -6.58, which is highly significant at .01 level. And from this it can be clearly deduced that there exists significant difference of low and high levels of intelligence on frustration of the male students.

Further, the mean value for high level of intelligence of the male students is higher in comparison to their counterparts having low level of intelligence. This helps establish an intimate relationship between intelligence and frustration on the sample of male students. In other words, it may be stated that male students having high intelligence are more frustrated in comparison to those male students who have low intelligence.

Hence the eighth hypothesis of the study “there is no significant difference in frustration at different levels of intelligence of adolescent boys” also stands rejected.

9. The significance of difference in frustration at different levels of intelligence of the female sample was also tested by the investigator in the previous chapter. Results of the t-test on this sample are expressed in Table-4.9 and it shows that the t-value with degree of freedom being 298 is -2.20, which is statistically highly significant at .01 level. All this is an
evidence to the fact that there is a high degree of positive relationship between different levels of intelligence on frustration in so far as the sample of female students is concerned.

Also the mean value for high intelligence is higher in comparison to low intelligence from which it can be established that the female students having high intelligence are more frustrated in comparison to those female students who have low intelligence.

Thus, the ninth hypothesis of the study "there is no significant difference in frustration at different levels of intelligence of adolescents girls" is also rejected.

10. The last main effect which was tested with the help of t-test in the previous chapter was the significance of difference of different levels of intelligence on frustration of total sample. In this context, Table-4.10 exhibits that the t-value for this sample was -5.87, which is highly significant at .01 level. This shows that there is significant difference in frustration of total sample at different levels of intelligence.

When the mean values of the low and high level of intelligence on frustration were compared it was found that the mean value for high intelligence was higher as compared to the low intelligence. This proves that there exists a positive relationship between the independent variable and the dependent variable. In other words, those students who have high
intelligence are more frustrated in comparison to those having low intelligence.

Hence the tenth hypothesis of the study "there is no significant difference in frustration at different levels of intelligence of adolescents boys and girls" also stands disproved.

5.2 TESTING OF HYPOTHESES PERTAINING TO INTERACTION EFFECTS OF INDEPENDENT VARIABLES

In this section the hypotheses relating to the interaction effects of the three independent variables (need achievement, academic achievement and intelligence) on the dependent variable (frustration) are tested. For this purpose, the statistical technique of analysis of variance has been applied to measure the interaction effects of the independent variables on frustration of male sample, female sample and the total sample and the following main inferences have been drawn on that basis.

1. The first of the two-way interaction effect tested with the help of ANOVA is that of intelligence and need achievement on frustration of male sample. The results of ANOVA on this sample are recorded on Table-4.11 while their mean values are given in Table-4.12B. Table-4.11 shows that the f-ratio for this interaction effect is 1.389, which was not found to be significant at any of the two levels of significance. Therefore, it may be concluded that no significant difference exists between
intelligence and need achievement on frustration of male students i.e., the joint effect the two has no relationship with the dependent variable.

Resultantly, the eleventh hypothesis of the study "there are no interaction effects of intelligence and need achievement on frustration level of adolescent boys" stands proved.

12. The interaction effect of intelligence and academic achievement on frustration of male sample was also tested with the help of ANOVA and its results are recorded on Table-4.11 while their mean values are given in Table-4.12C. Table-4.11 shows that the f-ratio for this interaction effect is 8.894, which is significant at .01 level. But the highest mean value for the joint effect of intelligence and academic achievement is for low intelligence and high academic achievement. It may, therefore, be concluded that male students having low intelligence and high academic achievement are more frustrated.

Thus, the twelfth hypothesis of the study "there are no interaction effects of intelligence and academic achievement on frustration level of adolescent boys" stands disproved.

13. Another interaction effect tested with the help of ANOVA is that of need achievement and academic achievement on frustration of male sample. The results of ANOVA on this sample are recorded on Table-4.11 while their mean values are given in Table-4.12D. It is evident from Table-4.11 that the f-ratio for this interaction effect is .107, which is not found to
be significant at any of the two significance levels. Hence it may be stated that no significant difference exists between need achievement and academic achievement on frustration. Thus, frustration has nothing to do with need achievement and academic achievement taken together and male students having low need achievement, high need achievement, low academic achievement or high academic achievement have all equal chances of being frustrated. In other words, the joint effect of the two has no relationship with the dependent variable (frustration).

Therefore, the thirteenth hypothesis "there are no interaction effects of need achievement and academic achievement on frustration level of adolescent boys" stands proved.

14. The first of the three-way interaction effect studied with the help of ANOVA is that of intelligence, need achievement and academic achievement on frustration of male sample. The results of ANOVA on this sample are expressed in Table-4.11 while their mean values are shown in Table-4.12B, 4.12C and 4.12D. It is evident from Table-4.11 that the f-ratio for this interaction effect is 2.446, which was not found to be significant at any of the two levels of significance as the values of 'f' are lower than the required value. It may be, therefore, safely inferred that the joint effect of intelligence, need achievement and academic achievement has nothing to do when frustration is taken as dependent variable in the case of male sample.
Evidently, therefore, the fourteenth hypothesis of the study "there are no interaction effects of intelligence, need achievement and academic achievement on frustration level of adolescent boys" stands proved.

15. Another two-way interaction effect desired to be studied with the technique of ANOVA is that of intelligence and need achievement on female sample. Table-4.13 contains the results of ANOVA on this sample whereas their mean values are shown in Table-4.14B. From Table-4.13 it is evident that the f-ratio for this interaction effect is 9.539, which is significant at .01 level. But, as depicted in Table-4.14B, the highest mean value for the joint effect of intelligence and need achievement is for high intelligence and high need achievement. Hence it may be stated that female students having high intelligence and high academic achievement are more frustrated.

Consequently, the fifteenth hypothesis of the present study "there are no interaction effects of intelligence and need achievement on frustration level of adolescent girls" could not be proved.

16. The investigator also analysed the two-way interaction effect, with the help of statistical technique of ANOVA, of intelligence and academic achievement on female sample. Table-4.13 contains the results of ANOVA on this sample whereas their mean values are shown in Table-4.14C. From
Table-4.13 it is evident that the f-ratio for this interaction effect is 8.894, which is not significant at any of the two levels. Thus, it may be stated that no significant difference exists between intelligence and academic achievement on frustration. Therefore, female students having low intelligence, high intelligence, low academic achievement or high academic achievement all have equal chances of being frustrated i.e., the joint effect of the two independent variables has no relationship with the dependent variable in the case of female sample.

Hence, the sixteenth hypothesis “there are no interaction effects of intelligence and academic achievement on frustration level of adolescent girls” stands proved.

17. Besides measuring the interaction effect of intelligence and need achievement and intelligence and academic achievement on female students, the investigator was also interested in knowing whether there is any interaction effect of need achievement and academic achievement on female students. The results produced on introducing the ANOVA technique are synthesized in Table-4.13 while the mean values of the joint effects of need achievement and academic achievement are shown in Table-4.14D.

From Table-4.13 it is evident that the f-ratio for this interaction effect is .277, which is not found to be significant at any of the two significance levels. It may be, therefore, unequivocally concluded that in
the case of female students no significant difference exists between need achievement and academic achievement on frustration. Thus, frustration has nothing to do with need achievement and academic achievement taken together and female students having low need achievement, high need achievement, low academic achievement or high academic achievement all have equal chances of being frustrated. Hence the joint effect of the two has no relationship with the dependent variable (frustration).

Therefore, seventeenth hypothesis of the study "there are no interaction effects of need achievement and academic achievement on frustration level of adolescent girls" stands proved.

18. The three-way interaction effect i.e., the joint effect of intelligence, need achievement and academic achievement on frustration in the case of female sample is the next three-way interaction effect studied by the investigator with the help of ANOVA. Its results are reproduced in Table-4.13 while their mean values are shown in Table-4.14B, 4.14C and 4.14D. It is evident from Table-4.13 that the f-ratio for this interaction effect is 2.446. But it is not found to be significant at any of the two levels of significance as the value of this ratio is lower than the required value. It may be, therefore, safely concluded that the joint effect of intelligence, need achievement and academic achievement has nothing to do when frustration is taken as dependent variable. In other words, female students
having low or high intelligence, low or high need achievement, low or high academic achievement are all equally vulnerable to frustration.

Hence, the eighteenth hypothesis of the study "there are no interaction effects of intelligence, need achievement and academic achievement on frustration level of adolescent girls" is proved.

19. The two-way interaction effect of intelligence and need achievement on frustration was also studied in the case of total sample as well. The f-ratio, as is evident from Table-4.15, for this interaction effect is 8.753, which is statistically highly significant at .01 level. But the highest mean value for the joint effect of intelligence and need achievement, as depicted in Table-4.16B, is for high intelligence and high need achievement.

Therefore, the nineteenth hypothesis of the study "there are no interaction effects of intelligence and need achievement on frustration level of adolescent boys and girls" could not be proved.

20. The interaction effect of intelligence and academic achievement on frustration of total sample was also measured with the help of the technique of ANOVA and the results thereof are recorded on Table-4.15 while their mean values are given in Table-4.16C. This table shows that the f-ratio for this interaction effect is 10.562, which is significant at .01 level. But the highest mean value for the joint effect of intelligence and
academic achievement, as depicted in Table-4.16B, is for high intelligence and high need achievement.

Thus twentieth hypothesis of the study "there are no interaction effects of intelligence and academic achievement on frustration level of adolescent boys and girls" stands disproved.

21. Among the two-way interactions studied with the help of ANOVA in the last chapter, the interaction effect of need achievement and academic achievement on total sample was also included. The results of ANOVA on this sample are presented in Table-4.15 and the mean values for the joint effect of the two independent variable are shown in Table-4.16D. F-ratio for this interaction effect is 1.452, which is not found to be significant at any of the two significance levels. Hence it may be stated that in the case of total students no significant difference exists between need achievement and academic achievement on frustration. In other words, frustration has nothing to do with need achievement and academic achievement taken together and total students having low need achievement, high need achievement, low academic achievement or high academic achievement all have equal chances of being frustrated. Hence the joint effect of the two has no relationship with the dependent variable (frustration).
Therefore, it is obvious that the twenty-first hypothesis of the study "there are no interaction effects of need achievement and academic achievement on frustration level of adolescent boys and girls" stands proved.

22. The next interaction effect studied by the investigator pertains to the joint effect of intelligence, need achievement and academic achievement on total sample. The statistical technique applied was once again that of ANOVA. The results of this interaction effect are reproduced in Table-4.15 whereas the mean values of the three independent variables are shown in Table-4.16B, 4.16C & 4.16D.

It is obvious from Table-4.15 that the f-ratio for the interaction effect intelligence, need achievement and academic achievement is 4.792, which is statistically significant at .05 level. This means that significance difference exists between intelligence, need achievement and academic achievement on frustration in the case of total sample and hence the

Therefore, twenty-second and last hypothesis of the study "there are no interaction effects of intelligence, need achievement and academic achievement on frustration level of adolescent boys and girls" stands rejected.
5.3 MAIN FINDINGS

1. There is no difference of frustration between the male and the female students.

2. Male students having high need achievement are more frustrated in comparison to those male students who have low need achievement.

3. Female students having high need achievement are more frustrated in comparison to those female students who have low need achievement.

4. Total students who have high need achievement are more frustrated in comparison to those having low need achievement.

5. Male students having low academic achievement are more frustrated in comparison to those who have high academic achievement.

6. Thus, the female students having low academic achievement are more frustrated in comparison to those who have high academic achievement.

7. Total students who have low academic achievement are more frustrated in comparison to those total students having high academic achievement.
8. Male students having high intelligence are more frustrated in comparison to those male students who have low intelligence.

9. Female students having high intelligence are more frustrated in comparison to those female students who have low intelligence.

10. Total students who have high intelligence are more frustrated in comparison to those total students having low intelligence.

11. There are no interaction effects of intelligence and need achievement on frustration level of adolescent boys.

12. Male students having low intelligence and high academic achievement are more frustrated.

13. There are no interaction effects of need achievement and academic achievement on frustration level of adolescent boys.

14. There are no interaction effects of intelligence, need achievement and academic achievement on frustration level of adolescent boys.

15. Female students having high intelligence and high need achievement are more frustrated.

16. There are no interaction effects of intelligence and academic achievement on frustration level of adolescent girls.

17. There are no interaction effects of need achievement and academic achievement on frustration level of adolescent girls.

18. There are no interaction effects of intelligence, need achievement and academic achievement on frustration level of adolescent girls.
19. Total students having high intelligence and high need achievement are more frustrated.

20. Total students having high intelligence and high academic achievement are more frustrated.

21. There are no interaction effects of need achievement and academic achievement on frustration level of total students.

22. Significant difference exists between intelligence, need achievement and academic achievement on frustration level of total students.

5.4 EDUCATIONAL IMPLICATIONS

The present study throws adequate light upon the selected variables - frustration, intelligence, need achievement and academic achievement - of the adolescents boys and girls by establishing their relationship and their relative importance in the field of education. It has also been found that high frustration adolescents and low frustrated adolescents have showed significant differences on various cognitive and non-cognitive variables. Frustrated children are to be guided or such frustrated children are to be sent for some vocational and occupational training or for higher learning, their traits should be taken into consideration for their future success. The present study is important for the teachers, students, researchers, psychologists, sociologists,
philosophers, planners, educationists and guidance workers. Frustration is common in the daily life of an individual and it has been termed as the abnormal state of mind by the psychologists when an individual feels some difficulty, he becomes frustrated and loses his balance of mind and behaves in an abnormal manner. Some are frustrated easily and some persons do not bother and avoid such situations. Frustration is a very important factor which influences the cognitive and non-cognitive personality development of an individual.

We have to make separate arrangements for teaching sensitive students and those students who easily get frustrated. It has also brought to light that low frustrated students are more intelligent than the high-frustrated students. Thus they show significant differences on intelligence i.e., on its various aspects. Therefore, the educationists should keep intelligence as a screening device while admitting the students for science, commerce or arts streams. The low frustrated students have better academic achievement in comparison to the highly frustrated students. The highly frustrated students are slow in learning and suffer from anxiety and aggression. It is also essential to note that intelligence, academic achievement, aggression and personality traits are responsible for frustration among the adolescents. Thus viewed in this light the study is very important in the field of education.
5.5 SUGGESTIONS FOR FURTHER STUDIES

1. The same study can be conducted on a larger sample of adolescent boys and girls.

2. The causative factors which make a person frustrated in the environment can be studied in relation to personality traits, intelligence and adjustment.

3. A comparative study of frustration among the adolescent boys and girls can be taken between the two states e.g., Haryana and Punjab in relation to their cognitive and non-cognitive attributes.

4. The change in the personality development and the change in the level of frustration can be studied in both the sexes with the passage of time.

5. The same study can be done upon the students of science and commerce graduates on the one hand and science and arts graduates on the other hand.

6. A comparative study can also be done between the private and aided schools.

7. The same study can be done upon the students knowing Hindi and English.

8. A comparative study can also be done between the government and public schools.

10. A comparative study of frustration among adolescent boys and girls can be done with high and low adjustment in the school.

11. A comparative study can be done between the adolescent boys and girls with the high and low anxiety.

12. A comparative study of the frustration among the boys and girls can be done between the students studying in the colleges and in the universities, in the states or at the interstate levels.