CHAPTER VI

SUMMARY, CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS.
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6.1 Introduction:

Academic achievement is a complex phenomenon. It can perhaps be explained as a result of the interaction of some intellectual and personality factors. In addition to the intellectual factors, different personality variables are predictors of academic achievement has increasingly claimed the attention of number of researchers. To account for the discrepancy between potential and actual achievement, a wide variety of personality traits such as extroversion, neuroticism, achievement motivation, self-concept or self-esteem, anxiety (general and test) etc. have been considered. (Gaudry and Spielberger, 1971; C. Mayer, 1972). Different studies have shown that such personality attributes, more especially test anxiety, self-concept and level of aspiration are significant factors in producing this discrepancy.

Thus, the present problem was designed to study the effects of self-concept (perceived self), test anxiety, level of aspiration and intelligence (verbal) on achievement in different school courses.

Self-concept has been regarded as an important
aspect of personality and critical determinant of behaviour. Self-concept may be defined simply as the total collection of attitudes, judgements, and values which an individual holds with respect to his behaviour, his ability, his body, his worth as a person – in short, how he perceives and evaluates himself. Roger's theoretical approach attempts to deal with the total individual as an organised whole. Behaviour is believed to be a function of the individual's perception of events, and a frame of reference of the scientist must be internal rather than external. Related to this concern is the tendency to emphasize internally directed behaviour as opposed to externally directed behaviour. The most important aspect of an individual's phenomenal field is that portion which consists of the perception of 'I' or 'me' – the self. The self has two fold purposes, enhancement and defence. If people say of us that we are good, friendly or beautiful, this is enhancement to the self. If, on the other hand they say of us that we are bad, evil, unfriendly, this has been a destructive impact on the self-concept. Poor self-adjusted people lack confidence in facing and mastering the environment and thus leads to deficiency in the person's area accomplishment i.e., their performance in school and college. Purkey (1970), argued for a direct and positive relationship between a favourable self-concept and performance. It held that the successful student see
himself in essential positive ways. The assumption is that the student with adequate self-concept feeling that he can succeed, will put forth the necessary effort to achieve in school and college. Students with high self-concept are usually superior in academic performance. Very few studies have so far been conducted on self-concept. A number of studies conducted in this field have brought out significant results.

Anxiety is a world wide phenomenon and has come into greater prominence in recent times. It has captivated the attention of numerous psychologists and investigators and a large amount of research has been devoted to it because anxiety is considered as a block to an activity. A person who suffers from anxiety may not be able to devote his full energy in the performance of a task. It is, therefore, considered that anxiety interferes with the activity and so learning is impeded. If the anxiety is too much, it would create a need to avoid the learning situation and too little anxiety would result in a lack of attention. Only "normal anxiety" can make students receptive to learning. Thus anxiety effects the learning in general and academic situations in particular. The test anxiety theory was introduced more than two decades ago by Mandler and Sarason to account for the effect of anxiety on performance in test situations. Anxiety in a test situation may actually facilitate the performance of some students, more often it is disruptive and leads to performance decrements. In order to explain these performance decrements, Mander and Sarason assumed that
two kinds of learned drives were evoked in testing situation. One set of drives, called 'learned task drives', is elicited by the demand characteristics of the task. These drives stimulate task-relevant responses that lead to the reduction of the drive through task completion. The second type of drive evoked in testing situations was labelled 'learned anxiety drive'. Two types of responses were elicited by learned anxiety drives (i) task-relevant responses and (ii) task-irrelevant responses. Since anxiety-mediated, task-relevant responses facilitate task completion, they are functionally equivalent to learned task drives. Both of these drives contribute to the facilitation of effective performance, the task-irrelevant responses evoked by learned anxiety drives interfere with performance in testing situation.

Effects of anxiety vary with the nature and content of a particular course (Cox, 1964; Killer and Rowley, 1964; Kestenbaum and Weine, 1970; Gaudry & Fitzgerald, 1971; Merryman, 1974). Total achievement in school courses is an outcome of achievement in various school courses of a simple as well as complex nature. Consequently achievement involves multiplicity of skills and habits. Some of the conditions that facilitate the achievement of high anxious students may have adverse effects on the low anxious. So, the composite score might reflect the combined facilitative and debilitating effects of anxiety. And it is desirable to consider achievement score in different school courses instead of aggregate achievement score. Thus, in the present study, achievement scores in different school course as well as aggregate scores
have been taken separately.

As we know that one of the most basic factors in human development and academic success is intelligence. It has generally been seen that individual who has higher IQ has more chances of success in academic situation than the one who has lower IQ. In certain type of school subjects, higher intelligence is necessity to achieve success while in others, average intelligence will do. So many correlations have been calculated between intelligence and School achievement. In most of the studies the correlation between mental test scores and school achievement is found to be near about .60. It was seldom higher than this. This means that many factors other than intelligence enter into school success.

Our last variable in the study is level of aspiration. Academic achievement is thought to be significantly influenced by level of aspiration also. Thus level of aspiration is defined as the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach. An aspiration level is not the highest level imaginable but the level which the individual sets as his high goal, and towards which he hopes he may - possibly rise. In short, it is the expected level of achievement of the individual. The subjective experience of success of failure is determined by the relation of the individual's performance to his level of
aspiration and not simply by his absolute accomplishments.

As compared to other variables, knowledge of level of aspiration is too limited to lend credence to generalizations. The concept of the evidence does indicate the presence and probable importance of aspirations to learning success. The construct of motivation must include aspiration level. The studies on level of aspiration with academic achievement conclude that high level of aspiration leads to high academic achievement. Therefore, the personality variables which seem to effect academic achievement are studied in the present problem entitled as'.

6.2 Statement of the problem:

"TO STUDY SELF CONCEPT, LEVEL OF ASPIRATION, INTELLIGENCE AND TEST ANXIETY AS DETERMINANTS OF ACADEMIC ACHIEVEMENT."

The need to undertake such study originated mainly because of the fact, that the area 'academic achievement' is quite important in the field of education research and it again becomes important to unravel the complex determinants of academic attainment. And the personality variables under study seem to effect the academic achievement. In the present study we will see that how far these variables effect the academic achievement.

6.3 Objectives of the study:

1. To study the test anxiety in relation to academic achievement of high school students in different school courses.
2. To study the self-concept in relation to academic achievement of high school students in different school courses.

3. To study the intelligence in relation to academic achievement of high school students in different school courses.

4. To study the level of aspiration in relation to academic achievement of high school students in different school courses.

5. To study the interaction between test anxiety and academic achievement.

6. To study the interaction between test anxiety and academic achievement.

7. To study the interaction between intelligence and academic achievement.

8. To study the interaction between level of aspiration and academic achievement.

9. To study the interaction among test anxiety, self-concept, intelligence, level of aspiration and academic achievement in different school courses.

10. To study test anxiety, self concept, intelligence and level of aspiration as predictors of academic achievement. (Aggregate achievement as well as in different courses).

11. To study test anxiety, self-concept, intelligence and level of aspiration as common factors affecting academic achievement.

6.4 Hypotheses:

The following are the hypotheses based on related literature and objectives of the present study:

1. Subjects with moderate test anxiety will show
higher academic achievement than their counterparts at high and low test anxiety. And subjects with low test anxiety will show higher academic achievement than their counterparts at high test anxiety.

2. Subjects with high self-concept will show higher academic achievement than their counterparts at low self-concept.

3. Subjects with high intelligence will show higher academic achievement than their counterparts at low intelligence.

4. Subjects with high level of aspiration will show high academic achievement than their counterparts at low level of aspiration.

5. There will be significant interaction between test anxiety and academic achievement.

6. There will be significant interaction between self-concept and academic achievement.

7. There will be significant interaction between intelligence and academic achievement.

8. There will be significant interaction between level of aspiration and academic achievement.

9. There will be significant interaction among test anxiety, self-concept, intelligence and level of aspiration.

10. Intelligence and self-concept are better predictors of academic achievement.

11. Intelligence and self-concept are the common factors affecting academic achievement of X class students.

6.5 Procedure and Techniques.

6.5.1 Experimental Design-

To test self-concept, test anxiety, intelligence and
level of aspiration, different scales with instructions were given to subjects to perform. Whole test was divided into four parts. In part I the product moment correlations were computed among different independent variables viz., self concept, test anxiety, intelligence, level of aspiration and dependent variables viz., total achievement, achievement in Mathematics, English, Social Studies and General Science. In part II step-wise linear multiple regression analysis was done with self-concept, test anxiety, intelligence and level of aspiration for total achievement and achievement in Mathematics, English, Social Studies and General Science. In part III, 3x2x2x2 analysis of variance was designed for total achievement and achievement in four school courses with three levels of test anxiety and two levels of each of self-concept, intelligence and level of aspiration. Extreme groups i.e. high and low were formed by taking subjects scoring above and below median on three tests i.e., self-concept, intelligence and level of aspiration. Three test anxiety groups were formed by taking i.e. high (above P66), average (between P33 and P66), and low (below 33), test anxiety. In Part IV, factor analysis was done on all the variables under study.

6.5.2 Sample-

The major population of the study was tenth class students of high and higher secondary schools of Shimla. 452 subjects were tested on the basis of their scores on test anxiety, self-concept, intelligence and level of aspiration
tests for the correlation, step-wise linear multiple regression
and for factor analyses. 336 subjects were selected for the
analysis of variance design i.e. 14 subjects in each cell. 
Achievement scores were based on a uniformly conducted
examination by the Himachal School Board of Education.

6.5.3 Tools Used:-

1. Hindi version of Sarason’s Test Anxiety scale
   for children (TASC) developed by Nijhawan (1972)
   was used as a measure of test anxiety in school
   children.

2. For measuring self-concept, Deo’s Personality
   word list (PWL) was used.

3. Hindi version of Mundal’s (1972) general ability
   test (a verbal test of intelligence) was used in
   the present study.

4. To measure level as aspiration of the students,
   two level of aspiration tasks were used in the
   present problem.
   (i) Letter cancellation Task.
   (ii) Digit-symbol substitution Task.

5. Academic achievement
   scores in aggregate and
   in four school courses were collected from school
   records.

6.5.4 Statistical techniques used:-

1. Correlation Analysis:-

Product-moment correlation analysis was used on
nine variables in the study to find out the relationship
between two variables at a time.

2. Step-wise Linear Multiple Regression Analysis:-

   Was used on test anxiety, self-concept, intelligence
and level of aspiration as predictors and academic achievement in Mathematics, English, Social Studies, General Science and total achievement as predicted variable.

3. **Analysis of Variance:**

Was used to study the effect of test anxiety, self-concept, intelligence and level of aspiration on academic achievement in four school courses and on total achievement.

4. **Factor Analysis:**

Factor analysis was done on all the nine variables included in the study to study the factor structure. Principal-Axes Method was used.

6.6 **Conclusions:**

6.6.1 **Correlational Analysis:**

1. Test anxiety is negatively related to academic achievement in aggregate and in four school courses.

2. Test anxiety is differentially related to self-concept, intelligence and level of aspiration.

3. Test anxiety is significantly related to achievement in English and General Science.

4. Relationship of Test anxiety with achievement in Mathematics, Social Studies and total achievement is negative but non-significant.

5. Self-concept is significantly related to achievement in four school courses, and total achievement and considered to be an important variable effecting the academic achievement.

6. Self-concept is significantly related to intelligence, Test anxiety and level of aspiration.

7. Intelligence is also related significantly to achievement in aggregate as well as achievement in four school courses.
There is no significant relationship between intelligence and level of aspiration.

Level of aspiration is negatively related to achievement in Mathematics but the relationship is non-significant.

Relationship of level of aspiration with English, Social Studies, General Science and aggregate achievement are positive but non-significant. Thus level of aspiration considered to be an unimportant variable effecting the academic achievement.

**Step-wise Linear Multiple Regression Analysis:**

1. Self-concept and intelligence come out to be the best predictors of achievement in Mathematics than test anxiety and level of aspiration.

2. In the achievement of English, test anxiety and intelligence come out to be the best predictors than self-concept and level of aspiration.

3. In the achievement of social studies, self-concept and intelligence seem to be the best predictors than test anxiety and level of aspiration.

4. In the achievement of General Science too self-concept and intelligence come out to be in best predictors than test anxiety and level of aspiration.

5. Self-concept and intelligence again seem to be the best predictor of aggregate achievement than test anxiety and level of aspiration.

**Analysis of Variance:**

For Aggregate Achievement:

Main effect of test anxiety was highly significant. Moderate test anxiety considered to be more appropriate level to achieve higher scores in aggregate achievement.
2. Main effect of self-concept was also statistically significant in aggregate achievement. Students with high self-concept seemed to achieve higher scores in aggregate achievement than students with low self-concept.

3. Main effects of intelligence and level as aspiration did not seem to give significant results.

4. Two factor and three factor interaction effects were not significant in aggregate achievement.

5. Four-Factor interaction of Test anxiety, self-concept, intelligence and level of aspiration (ANSSXIXL) was significant. It was concluded that students with moderate test anxiety, high self-concept, high intelligence and high level of aspiration achieved highest marks in aggregate. Students with low test anxiety, low self-concept, low intelligence and high level of aspiration scored minimum marks in aggregate achievement. Further, it was observed that groups with high self-concept and high intelligence scored more marks irrespective of their test anxiety and level of aspiration levels.

ACHIEVEMENT IN MATHEMATICS:

6. Main effect of test anxiety gave statistically significant results. It was concluded that moderate test anxiety facilitated the achievement in Mathematics where as low and high test anxiety debilitated the performance in Mathematics. When the achievement of low and high test anxious students was compared, it was found that students
with low test anxiety achieved better scores in Mathematics than students with high test anxiety.

7. Main effect of self-concept was also significant statistically. Students with high self-concept achieved more marks in Mathematics than students with low self concept.

8. Like the analysis of aggregate achievement, the main effects of intelligence and level of aspiration failed to give any significant results in the analysis of Mathematics too.

9. The two-factor interaction effect of test anxiety and intelligence failed to give any significant result whereas interaction effect of self-concept and level of aspiration (SXL) gave statistically significant results. Subjects with high self-concept and low level of aspiration seemed to achieve highest scores in Mathematics than students with low self-concept and low level of aspiration. Again the students with high self-concept and low level of aspiration scored better marks than students with high self-concept and high level of aspiration. It was concluded that self-concept is more marked in the achievement in Mathematics and level of aspiration is less marked.

10. The three order interaction and four order interaction effects did not give any significant results in Mathematics.

**Achievement in English:**

11. Test anxiety as a main effect produced significant
results. It was concluded that test anxiety had its effect on achievement in English too. Moderate test anxiety facilitated the performance of students in English than low and high test anxiety. Again low anxious subjects scored better in English than high anxious subjects.

12. Main effect of self-concept also gave highly significant results. It was found that subjects with high self-concept achieved more marks in English than students with low self-concept.

13. Main effects of intelligence and level of aspiration again failed to produce significant results in English.

14. Two-factor and three-factor interaction effects were not significant in the achievement in English.

15. Like the analysis of aggregate achievement, the four-factor interaction effect was significant in the achievement in English too. It was found that subjects with moderate test anxiety, high self-concept, high intelligence and high level of aspiration scored maximum marks in English where as subjects with high test anxiety, low self-concept, low intelligence and low level of aspiration scored minimum marks. The results were exactly the same as was produced in aggregate achievement.

ACHIEVEMENT IN SOCIAL STUDIES:

16. Main effect of test anxiety was significant.
Thus, test anxiety seemed to effect the achievement in Social Studies also. It was found that moderate test anxious students achieved highest scores in Social Studies than low and high test anxious students. Again low test anxious students scored better than high test anxious students.

17. Unlike the analysis of other courses i.e., Mathematics, English and aggregate achievement; self-concept, as a main effect, did not produce any significant results in Social Studies.

18. Like the analysis of other courses, level of aspiration and intelligence failed to produce any significant results in the achievement in Social Studies also.

19. Two-factor and four factor interaction effect did not provide significant results in Social Studies.

20. The three factor interaction effect i.e. AXSXL in the achievement in Social Studies was significant. It was found that subjects with low test anxiety, high self-concept and high level of aspiration achieved maximum marks in Social Studies and subjects with low test anxiety, low self concept and high level of aspiration scored minimum marks.

ACHIEVEMENT IN GENERAL SCIENCE:

21. Main effect of test anxiety was significant in the achievement in General Science also. Again, moderate test anxious students were found to score maximum than low and high
test anxious students in General Science. Further, low

test anxious subjects scored better than those of high
test anxious students in General Science.

22. Self-concept, intelligence and level of

aspiration as main effects failed to produce significant

results in the achievement in General Science.

23. Two-factor, three factor and four-factor

interaction effects did not give any significant results

in the achievement in General Science.

6.6.4 Factor Analysis:-

1. First varimax factor shows that intelligence

play major role in the achievement of different school

courses specially in achievement in English, Social Studies

and General Science and in aggregate achievement. This

factor was named as factor of intelligence Vs. Scholastic

ability.

2. IInd varimax factor shows that students scoring

high in test anxiety measures will score low in intelligence

test and a student with high test anxiety and low intelligence

achieves poor marks in total achievement as well as in different

school courses. This factor was named as factor of test

anxiety Vs. Intelligence.

3. IIIrd varimax factor shows that level of

aspiration has no relationship with academic achievement and

with other independent variables. This factor we have named

as 'specific factor of level of aspiration.'
4. IV varimax factor shows that self-concept plays dominating role in the academic achievement. This factor we have named as factor of personality Vs. achievement.

5. Vth varimax factor shows that high achievement in one school course results high achievement in other school courses also.

6.7 Educational Implications.

The teachers are confronted with the problem of development of the potentiality of the children in the class room. These children come from different socio-economic strata, attitudes etc. Giving due consideration to the differences in the mental abilities of the students in the pursuit of educational objectives, the teacher has to motivate them fully so that their personalitites could develop to the maximum. If the teacher is aware of the relationship of personality variables with academic attainment, he would, then, be able to guide them in a proper manner. If the teacher is aware of the relationship of personality variables with academic attainment for science and arts students then he would be better equipped to deal with the class as a whole, as the case may be.

The teacher is also a guide and he has to help the students in the selection of various courses that require more concentration and diligent work and if the teacher
has a sound knowledge of the personality variables of his pupils it would be possible for him to guide them in a better way. The teacher has also to help the students in the selection of vocations for which vocational training is essential. If he knows the relationship between personality variables and academic achievement he would then, be able to guide them fully in the selection of any vocation.

6.8 Suggestions for further research:

1. The present study was confined to the students of tenth class only. It is suggested that similar investigation may be extended to the school children of other classes or standard.

2. The field of present investigation, is restricted to the students of Urban area. Personality variables as determinants of academic achievement may further be investigated with reference to rural subjects. Similar investigations may be carried out in the other area of Himachal Pradesh to confirm the derived results.

3. Investigations by employing academic specific instruments to measure different personality measures may be conducted to arrive at more definite conclusions about the effects and personality on academic achievement. The criteria of academic achievement may be standardized. The objective type achievement tests may be preferred to get more accurate results.
4. Sex or geographical residence as a separate independent variable may be included along with self-concept, test anxiety, intelligence and level of aspiration etc. while studying the interactive effects of these personality dimensions.

5. Similar investigation may be carried out with large sample and inspite of high and low groups of intelligence, self-concept and level of aspiration, middle groups may also be included in the study, so that average range of these personality variables may also be covered.

6. Investigations may be done on reducing the interfering effects of test anxiety on academic achievement.

7. The present investigation was carried on only with four personality variable i.e. test anxiety, self-concept, level of aspiration and intelligence. There are other personality variables affecting academic achievement which have left untouched in the present investigation because it was not possible to include all personality variables in a single study. Parallel investigations may be done on similar pattern.

Research concerning the effects of personality variables on academic achievement is greatly needed; not only correlational but also experimental studies to show how these variables can be translated into meaningful challenges, and how to confront with their variables so that high academic performance is achieved.