CHAPTER V
SUMMARY AND CONCLUSION

The phenomenon of 'achievement of excellence' has been frequently talked about in all fields of human activities and more so in the field of education. Many research studies have shown that a variety of personality and situational variables influence academic achievement of pupils. Among the cognitive variables affecting achievement, motivational dispositions have been found to play a significant role in transforming the human potentials into expressions of excellence in achievement. The present study attempts to investigate the relative influence of some of the important motivational variables like choice behaviour, level of aspiration, persistence and risk preference on academic achievement, keeping intelligence and socio-economic status constant.

Since the study involves probability measures in risk preference and choice behaviour tests, it was thought, that the concept of probability will not be best understood by students below the higher secondary stage. Further, choice behaviour and risk taking are affected by age, sex and cultural factors. So it was decided to approach six Boy's higher secondary schools of
Madras, selected randomly for the present study.

To assess the Socio-economic status, socio-economic status scale of Kuppuswamy has been used, as a group test. The Standard Progressive Matrices Test designed by Ravan has been administered, as a group test, to assess the intelligent level of pupils. Out of the 940 students who took the intelligence test and socio-economic status scale, only 193 were in the average level (Grade III) in both socio-economic status and intelligence and as such they selected for the main study.

Further, to study the effects of intelligence and socio-economic status on academic achievement, along with the four independent variables chosen for the present study, 92 students who had high variations in intelligence and socio-economic status were also considered apart from the 193 students with more or less equal intelligence and socio-economic status.

The academic achievement of students have been assessed through the composite achievement score developed from the average percentage of aggregate marks scored in all subjects in the quarterly and half-yearly examinations and the class teachers' rating on a five point scale. Using the quartile points, the sample of 193 students was divided into three academic achievement groups—high, moderate and low. To study the influence of the variables—choice behaviour, level of
aspiration, persistence and risk preference — each student of the sample was administered the following tests on a random sequence.

Using a choice dilemma test, constructed on the model of the one found in John's Cohen's study, subject's choice behaviour characterising the personality disposition of either (1) maximising the possibilities of success (Ms) or (ii) minimising the possibilities of failure (Mf) has been studied. These personality dispositions revealed through choice behaviour of individuals are akin to the two-fold classification of Atkinson based on the two predominant motives — achieving success and avoiding failure.

The level of aspiration test as conceived and designed by Rotter has been used to study the aspiration behaviour of the high, moderate and low academic achievers in terms of (i) goal discrepancy (ii) attainment discrepancy and (iii) expected level of performance that fulfilled their maximum and minimum satisfaction.

Differential persistence behaviour of the three achievement groups — high, moderate and low in solving line mazes has been studied, by quoting 80% and 20% performance norms for the critical task 'B' (unsolvable maze). Persistence scores have been analysed in terms of the number of trials taken and the time spent for the critical task 'B'.
A risk board has been designed for the study and Ogden Hamilton's experimental technique of estimating the subjective probability of success at different levels of the task by offering structured practice has been followed in this present investigation. Risk-taking behaviour has been analysed in terms of (a) risk preference score (b) risk aversion score and (c) level of successful performance in a goal risk task for which the subjects were quite new as well as the one in which they had adequate structured practice.

The present study aimed to investigate the following:

(i) Relative influence of the four motivational variables chosen for the study on academic achievement.

(ii) Inter-relationship between the four motivational variables.

(iii) Extent to which the impact of these motivational variables on academic achievement get modulated by the variations in intelligence and socio-economic status.

In order to gain a proper theoretical perspective, the research literature related to the behaviour of the four independent variables selected for the present study, have been reviewed, based on which the following hypotheses were formulated.

(i) The three achievement groups will exhibit significantly
different patterns of choice behaviour tendencies i.e. high achievers will show the tendency to maximise the possibilities of success at a higher level (Ms - high) and the low achievers will display a very high tendency to avoid failures and losses (Mf - high). The moderate achievers will be ambivalent in their choice behaviour but at a low level.

(ii) The three achievement groups will be significantly different in their aspirational behaviour i.e. the high achievers will show small positive G.D. and negative A.D scores respectively; the low achievers will show either very high positive or negative G.D. and A.D scores; the moderate achievers will not show any distinct pattern in their mean G.D and A.D scores like the other two groups of achievers.

(iii) The three achievement groups will show distinctly different patterns of expected performance that fulfil their maximum and minimum satisfaction.

(iv) The three achievement groups will differ significantly in their persistence behavior i.e. high achievers will persist longer in comparatively easier tasks whereas low achievers persist more in tasks of very high difficulty. Persistence behaviour of moderate achievers will not get discriminated by task difficulties.

(v) High achievers will show the maximum efficiency, the
moderate achievers medium efficiency and the low achievers the least efficiency respectively in completing the non-critical tasks A, C, & D.

(vi) In any risk task the three different achievement groups will exhibit different levels of risk preference, i.e. high achievers will seek more often intermediate risk, and the low achievers will choose extreme values of risk, moderate achievers will not show any such significant pattern of risk preferences, like the other two groups.

(vii) The level of successful performance in any task measured in terms of average preferred distance, number of winning shots and their weighted score, will be different for the three different academic achievement groups. i.e. the level of efficiency will decrease slowly from the high achievement group to the low achievement group.

(viii) If the subjects are allowed to know all about the risk task and their own ability in it, there will be significant change in the risk-taking behaviour as compared to their behaviour in a task in which they are quite unfamiliar i.e. high achievers will take increased risk and low achievers decreased risk in familiar tasks as compared to unfamiliar tasks, but moderate achievers will display no such significant difference in risk preference between familiar and unfamiliar tasks.
(ix) The three different academic achievement groups will show different amounts of gain in performance measured in terms of average preferred distance, number of winning shots and the weighted score for successful shots, due to practice received in a goal task.

(x) The variables, socio-economic status, intelligence choice behaviour, level of aspiration, persistence and risk preference will have significantly high bearing but of different amounts on the academic achievement.

A preliminary study helped to establish the reliability and validity of the tests and to streamline the instructions. The main study undertaken to test the hypotheses, yielded the following findings.

1. Academic achievement and choice behaviour:

The high academic achievement group exhibited the choice behaviour characterising the tendency to maximise the possibilities of success at higher level (Ms-high) where as the low achieving group displayed the choice tendency to minimise the possibilities of failure (Mf-low). Moderate achievement group also displayed the choice tendency of maximising the possibilities of success but at a low level (Ms-low). Thus high
and moderate achievers differed in degree rather than the types of choice behaviour, whereas the low achievers in contrast to this, displayed the tendency to concentrate on avoiding the possible failures or losses. This findings leads to the conclusion that when the potentials of performance are held constant, the variations in actual academic attainment depend largely on the motive to achieve success. This result is in conformity with the other research findings like that of Lowell (1952), Coleman (1966) Gokulanthan (1979) etc.

2. Academic achievement and aspiration:

High academic achievers maintained a small mean positive goal discrepancy and a small mean negative attainment discrepancy. The low achievers showed very feeble positive mean goal discrepancy and small positive attainment discrepancy,. This suggests that high achievers set their aspired goal little above their present performance whereas the ow achievers due to their predominant motivational disposition of fear of failure, set their future level of goal either on par with or little below their present performance. The moderate achievers resemble the high achievers in their goal setting behaviour. These findings are in line with other research findings like that of Festinger (1942) and Sears (1940).
The aspirational behaviour of individuals was studied from another angle also i.e. in terms of levels of expected performance that fulfilled their maximum, and minimum satisfaction. Even though the 'Upper Satisfaction Intervals' of the three achievement groups are almost alike, the groups differ in their 'Lower Satisfaction Interval'. The high and low achievement groups have the lowest and highest L.S.Is respectively. This resulted in turn, in the lowest and highest values of L/U-ratio (1.59 & 2.84) for the high and low achievement groups respectively. The significant differences in the values of L/U-ratio among the three achievement groups suggest that the actual performance of the high achievers is little lower than what they expected to attain and they become unhappy even with slight fall in their performance. On the other hand, the low achievers have the longest L.S.Is and highest L/U-ratio which in turn imply that they tolerate any low level of performance, that may bring minimum satisfaction. These findings coupled with the fact that low achievers have small positive A.D. scores, reveal that the low achievers, have more 'contentment' rather than 'aspiration' as the guiding force in their life in approaching any goals. In short, low achievers tend to show the personality trait of 'Contentment' rather than 'aspiration'. Though moderate achievers, resemble high
achievers in many aspects in their approach to goals, did not show any distinct pattern of aspirational behaviour.

3. Academic achievement and persistent:

High academic achievers displayed the behaviour of significantly high persistence measured in terms of number of trails and time taken in a task of 80% probability of success. When the task was extremely difficult (20% probability of success) their persistence was markedly low. Thus their behaviour showed an understanding of assessing the reality of the situation where achievement could be maximized. The low achievers on the other hand showed high persistence in the extremely difficult task and low persistence in comparatively easier tasks, indicating the personality trait of avoidance of failure. The moderate achievement group showed more or less similar persistence behaviour as that of the high achievement group. These findings are in line with those of Atkinson (1960), French and Thomas (1958), Norman Feather (1960, 61, 62) etc.

The three academic achievement groups showed significant difference in their efficiencies in completing the non-critical tasks measured in terms of 'time spent' and 'number of trials taken'. Efficiency in completing the non-critical tasks
decreased gradually from the high to the low achievement group. Thus the overall picture emerging from this study with reference to persistence behaviour of the three achievement groups is as under:

(i) High achievers are highly efficient in routine tasks where there is no threat of failure. However, in uncertain situations, they continuously judge the chances of success in a task and persist only if there seemed to be a fair chance of success in a task or otherwise they switch over to other tasks. Thus their persistence behaviour is backed by reason and realistic aspiration.

(ii) Low achievers, predominated by the anxiety to avoid failure, persist more longer in extremely difficult tasks than the easy ones. Perhaps this may be due to their thinking that if the present task is very tough there is no guarantee that other tasks are going to be less difficult than this one, which reflects a less optimistic view of life.

(iii) Moderate achievers, display persistent tendencies which are very similar to those of high achievers but of low intensity.

4. Achievement and Risk-behaviour:

The high achieving group preferred moderate risk values
where as the low achieving group chose extreme risks - either too low or too high risks. This differential behaviour was well indicated when risk aversion measure was employed in the place of risk preference scores. Moderate achievers did not indicate any such well marked pattern of risk behaviour.

When the subjects were allowed to know all about the risk tasks and their own ability in it, there was considerable change in the risk-taking behaviour in all the three achievement groups. High achievers increased their level of risk taking while the low achievers were significantly more cautious. Moderate achievers also seemed to be more cautious in known tasks as compared to unfamiliar tasks.

All the three groups showed gain in performance measured in terms of 'average preferred distance' and 'weighted scores for the successful shots' as a result of practice received in the risk task. This gain in performance was maximum for the high achievers and the least for the low achievers. Though the difference in the gain between the high and low achievement groups was significant, it was not so between the high and moderate achievement groups.

Practically there was not much of gain in performance due to practice, measured in terms of 'the number of winning shots' for all the three achievement groups. Thus the three
achievement groups differed significantly not in their frequency of getting success but in their levels of successful performance. The level of achievement of success was the highest for the high achievers, medium for the moderate achievers and the lowest for the low achievers.

5. Relative influence of different independent variables studied, on academic achievement:

The present study indicates that intelligence and socio-economic status put together accounted for 25% of academic achievement. Among the four motivational variables, choice behaviour accounted for greater amount of bearing on academic achievement. In fact choice behaviour influenced the other variables to form a distinct pattern among themselves. These four variables, independently and integratedly affect the level of academic achievement very significantly.

Summarising the overall findings, we can say that high achievers focus their attention on maximising the possibilities of success for a given probability of succeeding in a task in choice situations without showing much concern for the probable chances of failure, persist in comparatively easier tasks for longer time, aspire for realistically possible higher goals, show intolerance for fall in performance level, and take moderate risk in unfamiliar tasks. They take increased risk in a familiar task
as compared to the one in which they are quite new.

The low academic achievers on the other hand are obsessed with the thought of avoiding failures and minimizing possible losses in a given task, persist longer in tasks of high difficulty (to show later on the task difficulty as an excuse for their poor performance) and resort to extreme values of risk in unfamiliar tasks. They tend to become more cautious and take less risk in more familiar tasks. They show "contentment" rather than "aspiration" in goal performance and that is why they seemed to tolerate even very low performance.

The moderate achievers, display the choice behaviour of focussing on the possibilities of success, like the high achievers but at a low level (Ms-Low). They have goal discrepancy and attainment discrepancy of their goal-setting behaviour very similar to those of the high achievers. However their aspirational behaviour, expressed in terms of levels of expected performance fulfilling their maximum and minimum satisfaction, were akin to those of low achievers. In short, it could be inferred that moderate achievers did not exhibit a definite pattern of aspirational behaviour. With respect to their persistence behaviour, they are very similar to the high achievers but of low intensity.

In unfamiliar tasks, the moderate achievers, did not show
any distinct pattern of risk-taking behaviour. But in familiar tasks, they too, like low achievers become more cautious and seek less risk. They registered moderate gain in performance due to practice, measured in terms of 'average preferred distance' and the 'weighted score for the winning shots'. Thus the moderate achievers do not display a pattern of motivational disposition as distinct and unique as those of high and low achievers.

In moderate achievers intelligence and socio-economic status seem to play a major role as compared to the motivational variables. This may indirectly mean that inspite of their high potentials due to intelligence and socio-economic background, their achievement is not commensurate with it and remains at a moderate level. Looking at the other side, one may find students of high intelligence and low socio-economic status perform little below par and end up with middle-level performance. Students with low intelligence and high socio-economic status mostly exhibit low level of achievement; they also end up with moderate achievement level even if they show very high levels in the motivational variables.

Educational implication of the study:

The findings of this study point out that academic
performance is affected by both personality and environmental factors. Among these two types of factors, socio-economic status and intelligence cannot be manipulated by classroom teacher. In cases where students of high intelligence do not produce academic performance commensurate to their potential, it is mostly due to inappropriate and inadequate motivational dispositions like choice behaviour, level of aspiration, persistence and risk-preference. Teachers may endeavour to identify such students of under-achievement and develop in them the personality characteristics of focusing on the maximisation of possible gains, setting up of realistic aspirational goals, persisting till the cherished goals are reached, and being ready to take reasonable amount of risk even in unfamiliar tasks. It is important for educational institutions, along with their aim of improving academic skills in various school subjects, to take efforts to shape the motivational aspects of personality.

After all good education aims to develop a balanced personality in students but the shaping of personality should start right from the primary school level itself. The findings of this study are pointers to the desirable line of child-rearing practices at home. The home and the school should supplement each other in shaping the 'achievement syndrome' of the students, so that our society too can be transformed into an 'achieving society' with time.