SUMMARY AND CONCLUSIONS

SUMMARY OF STUDY.

In the present study an attempt was made to find out the effects of anxiety (test) and intelligence on learning and academic achievement of school children. As a matter of everyday experience, the existence of anxiety is undeniable. As a scientific construct, its ground remains unsure. From its beginning, the study of human anxiety has been handicapped by the absence of a consensual operational definition of the construct. The multiplicity of definitions make for confusion and difficulty in understanding conflicting experimental findings. In the present study, the focus was on 'test anxiety' (Mandler and Sarason, 1952; Sarason et al, 1960) Test anxiety relates to anxiety in relation to the quality of performance in a test situation.

The present study was divided into two phases. Phase-I consisted of administration of Hindi version of Test Anxiety Scale for children, and Jalota's General Mental Ability Test. The IIInd phase consisted of a more restricted and detailed study of the final sample drawn on the basis of test anxiety scores and intelligence .
scores. Administration of a learning task of concept formation (Hanfmann and Kasanin, 1942), analysis of the learning scores obtained in this task and academic achievement scores were the major features of Phase-II.

The starting point for the present research was the work done on anxiety in children by Sarason and associates (1960). Their theorizing about anxiety and formulation of hypotheses take shape within the framework of psychoanalysis.

Following hypotheses were formulated in the present research:

1. Performance of high test-anxious Ss would be relatively lower to that of their low anxious counterparts.

2. High intelligence Ss would perform better than low-intelligence Ss, irrespective of their anxiety level.

3. There would be interactive effects of anxiety and intelligence on learning/academic achievement.

The above hypotheses were tested separately for laboratory learning task and the academic achievement scores. In order to test these hypotheses, a 2 x 2 (AxB) factorial design was used, with two levels of test anxiety
(high and low). The design provided for four combinations of the independent variables. There were 15 Ss in each cell. The total amounted to 60 Ss in the final sample. The subjects were students studying in IXth standard in various schools of Rohtak City.

The final sample of 60 Ss was selected from a preliminary sample of 279 subjects who were tested on the TASC and Jalota's General Mental Ability Test. On the basis of their scores on these two tests, subjects were assigned to high (mean + I S D) and low (mean-ISD) anxiety and intelligence groups. The scores of HA Ss ranged from 20 to 29 and those of LA Ss ranged from 3 to 10 scores of HI Ss ranged from 82 to 94 and those of I Ss from 21 to 40.

Phase II of the study consisted of administration of a concept learning task. (Hanfmann and Kasanin, 1942), analysis of learning scores and analysis of aggregate achievement scores of the 60 Ss in the final sample. Achievement scores were based on a uniformly conducted examination by the School Board of Education. Following instruments were used in the present study:

1. Hindi version of Test Anxiety Scale for Children.
2. Jalota's General Mental Ability Test.
3. Concept Formation Test by Hanfmann and Kasanin.
4. Academic Achievement Scores.

For the laboratory learning task, criteria for learning was either one errorless trial or ten trials at the most. The dependent variables were the mean number of errors made and the trials taken in learning the task. Analysis was done for both the dependent variables. Analysis of academic achievement scores of the 60 Ss in the final sample was also done at this stage.

Results of the Study are presented below:-

1 (A) Results obtained on concept learning task:

Two analyses were done to interpret the raw data for the two dependent variables in the concept formation task i.e., total number of errors made and total number of trials taken in learning to form the concept. First, the analysis for the total number of incorrect responses was undertaken. The trend of the means in this analysis suggested that:

(a) LA Ss, averaged over intelligence, made fewer errors as compared to their HA counterparts.
(b) HI Ss made fewer errors than the LI Ss, regardless of their anxiety level.
(c) There was no significant interactive effect of anxiety and intelligence on learning.

In the second analysis of learning scores (mean number of trials taken), the results obtained were as follows:

(a) Anxiety had a significant effect on learning concept formation (p < .01). LA Ss took fewer trials than the HA Ss (averaged over intelligence), thereby proving the first hypothesis.
(b) Intelligence had a significant effect on learning (P < .01). HI Ss took lesser trials than their LI counterparts.
(c) There were no significant interactive effects of anxiety and intelligence.

On the basis of the results obtained in the analyses of learning scores, it could be concluded that anxiety and intelligence had significant effects on learning, but no interactive effects on the dependent variable. This was perhaps due to the absence of stress in the learning situation.
II. Results obtained on academic achievement.

The analysis of variance for academic achievement scores showed the following results:

a) There was significant main effect (P < .01) of test anxiety on academic achievement. The trend in the means showed that LA Ss had better academic performance than HA Ss.

b) Intelligence had a significant effect on academic achievement, (P < .01). The trend in the means confirmed that HI Ss, regardless of anxiety level, perform significantly better than LI Ss in academic situations.

c) Anxiety and intelligence had a significant interactive effect on the academic achievement of school children (P < .01)

Conclusions and General Implications.

It is often difficult to accept the fact that a student can have a good understanding of what is taught and yet consistently perform poorly on tests. The aim in this present investigation was to consider some of the factors that can influence the performance of students on tests and in evaluative situations generally. The test-anxiety had a debilitating effect on the learning and
academic achievement of school children. The performance of HA Ss was lower than the LA Ss. Moreover, the performance of HA-HI Ss was comparatively lower than that of LA-HI. The 'toppers' of the IXth class were also in the LA-HI group, suggesting that LA had a contributory effect on their success. The anxiety provoked by tests and the examination situation can therefore, be excessive indeed. Administrative arrangements would minimize the possibly unfortunate effects of anxiety if:

1. Important decisions were made on the basis of performance on many occasions, not just one, and

2. The more important the decision, the greater the opportunities that are provided for students to redeem themselves if they appear or believe themselves to have performed below their capabilities.

Experimental studies with anxious children show that they are very much dependent on the positive and encouraging attitudes of others towards them. If the dependency needs of the anxious child are satisfied, its performance is less adversely affected than otherwise. Such attitudes of the teacher, as negative references to his performance, inadequate compensation (verbal
approval) when it is due, assume crucial importance. Studies that used artificial stressors to arouse anxiety have revealed extreme arousal and more debilitative effects on performance, more so in the case of Ss with HA and LI.

Suggestions for Further Research.

1. The personality characteristics of parents who pressurize their children to achieve more and more in their examinations, can have a contributory effect on test anxiety, and therefore, warrant empirical enquiry.

2. The difference in pre-performance communications given to groups differing in test anxiety can have quite different consequences for behaviour and performance and therefore requires organized research.

3. It is necessary to find out whether test anxious children have adjustment problems in other areas.

4. It is important to establish whether test anxiety is simply a result of 'study skills deficit', A child lacking the appropriate strategies for learning will probably show more test anxiety.

5. Further enquiry should be directed towards finding out under what conditions deprecating self-instructions
become operative (Sarason, et al, 1960)

6. Subjects react differently to anxiety; some anxious students exhibit mental alertness, others reduced functioning. A critical factor responsible for these diverse responses to test anxiety could be the personality characteristics of these students. Experimential enquiry into this area could prove to be quite fruitful.