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SUMMARY, CONCLUSIONS AND SUGGESTIONS

8.1 Anxiety performance relationship:
Role of teachers

The purpose of the present investigation was to study motor performance as a function of some personality variables. The investigator has selected anxiety as the personality variable since it is the most widely discussed and also with a lot of contradictory findings with reference to anxiety-performance relationship. As the relationship between anxiety and academic performance is well established and since high anxiety adversely affects the academic achievement, as a teacher we can try to reduce these adverse effects of anxiety on academic achievement by some interventions. Though both the effects (performance facilitation and decrement) are found, we are concerned only with the negative effects.

Most of the students complain that during the examination period they feel anxious and hence cannot study effectively because they feel that their anxiety interferes their study. Some of them report that they 'know' the answers, still they are unable to reproduce them, because they are 'blocked' or 'chocked up' in the test situation. It is really unfortunate that because of such demanding pressures and tensions such students fail to achieve their determined goals.

It is said that anxious students are disturbed and their performance affected due to excitation. Can teachers help them to
reduce their excitation? If it is true that high anxious subjects perform more poorly than the low anxious subjects even on simple tasks, counselling should be given to reduce the examination phobia. On more difficult or complex tasks, correct responses are likely to be relatively weak in early stages of learning. So while setting the question paper more difficult questions should be set in the end. The strength of the correct response would be expected to increase over trials as a function of practice. Teachers must consider the test-taking difficulties and guide them about better and efficient study methods. There are other complications also. Some students are afraid of their teachers, others are afraid of certain academic subjects while some are anxiety-prone. For these groups counselling is required.

8.2 Methodology

The investigator has taken one more organismic variable i.e. intelligence. The main reason in selecting this variable in performance studies is that the task-difficulty is closely related to the level of intelligence of the subject. The concept of anxiety used in this study is borrowed from the Spielberger's state-trait anxiety model i.e. anxiety as a trait and anxiety as a state. Spielberger's state anxiety concept has been used in a number of studies as a measure of stress. The investigator has therefore, followed state anxiety as a stress measure.
The tasks used in this study are: (1) two-hand co-ordination (perceptual-motor) (2) letter-transformation task (cognitive). A question could be raised as to why the cognitive task is used in the present study when the title focuses only on motor performance. The investigator feels that the nature of the task and the difficulty of the task are important variables in relating anxiety with performance. Therefore, motor task was compared with a different type of tasks (cognitive) without changing the difficulty level. In the present study the perceptual-motor task and cognitive task are sufficiently complex.

The dependent variable in this study is obviously the performance. This is measured in terms of the correct hits at the proper places in two-hand co-ordination task and the correct transformations of the letters in cognitive task. The independent variable in the study are state and trait anxiety and also intelligence. These independent variables are the organismic variables (S-type). A sample of high anxious and low anxious subjects was selected on the basis of State-Trait Anxiety Inventory (Marathi adaptation) and high intelligent and low intelligent subjects were chosen on the basis of Kuhlman-Anderson test of intelligence (Marathi-adaptation). A 2 x 2 factorial design was used with two levels of intelligence (high and low) and two levels of anxiety (high and low) with 20 equal replications in each cell. In all, 80 subjects were used for perceptual-motor experiment. However, these 80 subjects differ on the state anxiety level and therefore this does not satisfy the criterion of
the equal number of replications in each cell so far as state anxiety level was concerned. 2 x 2 factorial design was also used for the same two levels of intelligence and state anxiety in the cognitive task-performance experiment.

8.3 Analysis of results

In the two-hand co-ordination task there were three performance measures (1) Right-hand performance (2) Left-hand performance (3) Both the hands together performance. In the cognitive task, however, there was only one score namely the accurate transformation score. The descriptive and inferential statistics were used to analyse the results. In the two-hand co-ordination task, the obtained scores were normally distributed and therefore parametric statistics was used while analysing the results, whereas in cognitive task the scores of one group were non-normally distributed hence, non-parametric statistic was used (Mann-Whitney U-test). The treatment of results was done as follows:

(a) intelligence and trait anxiety as related to right-hand performance in perceptual-motor task.

(b) intelligence and trait anxiety as related to left-hand performance in perceptual-motor task.

(c) intelligence and trait anxiety as related to both the hands together performance in perceptual-motor task.
2. (a) intelligence and state anxiety as related to right hand performance in perceptual-motor task.

(b) intelligence and state anxiety as related to left-hand performance in perceptual-motor task.

(c) intelligence and state anxiety as related to both the hands performance in perceptual-motor task.

3. intelligence and trait anxiety as related to cognitive task.

4. intelligence and state anxiety as related to cognitive task.

8.4 Findings

The investigator had formulated five hypotheses and she obtained the following findings, some supporting the hypotheses and some rejecting them. These are as follows:

The hypothesis Number 1, viz., high anxious subjects will be better in performance than the low anxious subjects on single task, whereas low anxious subjects will be better on double task in perceptual-motor performance, was rejected.

The results supported hypothesis Number 3 that the performance of high intelligent subjects will be better than the low intelligent subjects on perceptual-motor task.
Hypothesis Number 4 that the difference between the performance of high intelligent and low intelligent subjects will be more pronounced in cognitive-task performance than in perceptual-motor performance was supported.

Hypothesis Number 2, i.e. in cognitive task performance, the low anxious subjects would be better than the high anxious subjects was supported.

The results are not convincing to say that state anxiety is a better predictor of performance than trait anxiety in perceptual-motor task. Hypothesis Number 5 was therefore rejected.

8.5 Conclusions

To summarize the findings of the study. The investigators would like to say that:

1. Trait anxiety is a variable of importance in performance when the task difficulty is pretty high. This variable is found to be significantly related to performance in cognitive task.

2. The investigator thought that state anxiety is a better predictor of performance than trait anxiety but the findings of the present study did not support fully her contention. State anxiety was found to be better predictor of perceptual-motor task than cognitive task.

3. Intelligence was found to be very closely related to performance on both the tasks. The interaction between intelligence and anxiety was not found to be statistically significant in both the tasks.
The findings of the present study are discussed on the basis of the following models: Iowa model of anxiety (Spence's model of anxiety), Yale model of anxiety (Mandler-Sarason), State-trait model of anxiety (Spielberger) and Tobias' model of anxiety.

8.6 Limitations of the study

The present study is limited only to two types of tasks and one level of difficulty similarly only two levels of anxiety and intelligence are used. It would have been better to use the moderate level of anxiety and also a moderate level of intelligence in the study. Similarly, for comparison of the tasks the simple task could have been used.

Another limitation of the study is that the task could have been of varied nature namely the motor, perceptual-motor, the verbal, the cognitive and the problem-solving etc. This could have given a better picture of anxiety-performance relationship.

The small size of the sample sometimes creates trouble in analysing the results. The investigator has taken 20 replications in each cell with trait anxiety level but the same could not be possible for state anxiety level.

8.7 Suggestions for further studies

The studies on anxiety-performance relationship be made beyond the laboratory set-up i.e., class-room environment, job performance
and so on. Such studies may probably lack the rigorous experimental control of the laboratory; they will have more relevance to everyday life situations.