

# ACHIEVEMENT MOTIVATION LEVEL OF PRIMARY SCHOOL CHILDREN: ANXIETY AND ACADEMIC ACHIEVEMENT

K.N. MISHRA

The study explores the effect of achievement motivation on anxiety and academic achievement of children. The Test Anxiety Scale for Children (Sarason, Davidson, Lighthall and Waite, 1958), General Anxiety Scale for Children (Sarason *et al*, J958) and Achievement Motivation Scale (Robinson and Argule, 1961 cf. Cohen, 1976) were administered to 183 primary school children reading in classes III through V. Children were grouped into high and low achievement motivation groups on the basis of median split on achievement motivation score. These groups were matched on motivational levels. The findings showed that children with high n-ach performed better academically and possessed significantly low level of test anxiety. However, they failed to differ in general anxiety. A disordinal interaction was observed between education and achievement motivation level on test anxiety. It was further observed that academic achievement of class III children was negatively correlated with general anxiety and positively with test anxiety. In case of class IV and V children, academic achievement was negatively correlated with both general and test anxiety. The low achievement motivation children of class V showed significant and positive correlation between academic achievement and test anxiety.

*Dr. K.N. Mishra is a faculty member from the Regional College of Education, Bhubaneswar.*

Programmes designed to identify and support children with outstanding talents, or having a persistent problem of dropout and under-achievement, or programmes to attain a minimum level of learning and competency, education for all and so on have attracted attention of educationists on academic achievement of children and factors associated with it. Academic achievement of children includes both cognitive and non-cognitive aspects. Generally, academic achievement is

considered as marks or grades obtained in a written examination, which is nothing but the capacity of a child to recall from memory the answers to questions. The academic achievement of children is effected by many social and psychological factors and makes a discrepancy between expectations and real achievement of children. Numerous instances can be cited where actual performance of children differ widely from their own expectations and those of their parents and teachers. The reason behind it may be present in the current examination system, decline of an academic climate, and so on. In this way academic achievement is invariably the outcome of the combined efforts of children, teachers, school management and the social climate. The importance of children's ability in achievement is unquestionable. Research findings show that the academic achievement of children is influenced by the level of motivation to achieve higher standards. This is an acquired motive which grows under the effective control of an individual's experience in certain realms of social interaction. Its presence in children itself is determined by various factors such as sex, race, and social class (Bartel, 1971; Feather and Simon, 1973; Horner, 1978; and Mohanan, Kuhu and Shaver, 1974).

It is observed that children with a high self-concept have high achievement motivation which significantly contributes to their academic achievement (Mishra, 1992a). The sex and achievement motivation of children also affects their academic achievement. Female children have a higher achievement motivation and they secure higher marks in comparison to their male counterparts (Mishra, 1992b). Panda (1990) observed that children with an anxiety trait have a negative relationship with their school achievement. Low anxiety children were better in serial verbal learning tasks as compared to high anxiety children (Purandare, 1984). The achievement motivation of children is effected by their age, and their parent's educational level (Ahluwalia, 1985). The children's grade was also revealed as an effective variable on achievement motivation. Need for achievement is correlated significantly with intellectual efficiency, introversion-extroversion, mathematics achievement (Singh, 1986), and socioeconomic status (Mansuri, 1986; Singh, 1986; Tripathi, 1986). Children with high level of socioeconomic status were found to have a significantly high achievement motivation. The academic performance of children is positively and significantly related with their achievement motivation.

The present study is aimed to ascertain whether a child's academic achievement and anxiety vary in terms of achievement motivation of

children, and to explore correlation among these variables so as to see dependability of various measures.

## Method

### Sample

One hundred and eighty-three primary school children of class III to V served as samples for the present study. The number of children studying in class III, IV, and V were 48, 64 and 71 respectively. The children were grouped into high and low achievement motivation group on the basis of a median split on achievement motivation scores. The number of children under each group have been presented in Table 1. Unequal N has been taken care of in the analysis.

**Table 1**  
**NUMBER OF CHILDREN UNDER EACH EDUCATIONAL AND MOTIVATIONAL LEVEL**

<i>Achievement Motivation Level</i>	<i>Educational Level</i>		
	<i>III (44.5)</i>	<i>IV (47.0)</i>	<i>V (54.25)</i>
<b>High</b>	23	32	37
<b>Low</b>	25	32	34

*Note:* The Median score on Achievement Motivation Scores are presented in parenthesis.

### *Achievement Motivation Scale*

The Achievement Motivation Scale (Robinson and Argule, 1962, cf: Cohen, 1976) has been widely used in Indian conditions (Mohanty, 1985; Nayak, 1992; Panda, 1990; Rath, 1991; Ray, 1982; Santra, 1991;). The test is found to be a suitable tool for measuring achievement motivation of children based on success and failure experiences. The split-half reliability was established and it was found to be around 0.54 in Indian conditions (Panda, 1990). The effect of n-ach as revealed in these studies is, in itself, an indication of the discriminant validity of the test. The scale was used here with the sole purpose to classify children under high and low achievement motivation groups.

### *Test Anxiety Scale for Children*

The Test Anxiety Scale for Children (TASC) (Sarason *et al*, 1958) consists of 30 questions relating to children's feelings about their school, examination and examination-like situations. The child

respondent gives his/her response by encircling 'Yes' or 'No'. The score on the scale can be computed by counting the number of times 'Yes' is encircled against the statement. A low score on the TASC suggests that the child is not characteristically anxious in examinations and examination-like situations. The validity of TASC was established and was found to have a negative correlation ranging from  $-.002$  to  $-.234$  between overt indicators of anxiety and TASC scores.

### *General Anxiety Scale for Children*

The General Anxiety Scale for Children (GASC) (Sarason *et al.*, 1958) consists of 45 items including eleven lie items scattered throughout the scale. The scale includes items like the thoughts and feelings of children to different anxious situations such as health problems, personal adequacy, safety of family members, and so on. The total score of a child can be obtained by counting the number of items encircled 'Yes' excluding those eleven lie items. Sarason, Davidson, Lighthall, Waite and Ruebush (1960) have done a great exercise to establish reliability and validity of the test. The scale was found psychometrically sound to measure general anxiety of children, specifically in a reliable and valid way (Mohanty, 1985) with Oriya primary school children.

### *Academic Achievement*

English and English (1958) defined academic achievement as an attained ability to perform school tasks. In this study, the marks obtained in previous examinations are taken into consideration and converted into T-Score in order to control difficulty level of questions used in school examination. School examination marks are customarily used as a measure of achievement for social research purposes (Buch, 1984; Buch, 1989).

### **Analysis of Results**

It is clear from the values presented in Table 2 that the academic achievement of the high achievement motivation group children was better as compared to that of the low achievement motivation group children. The variation of academic achievement is low among low achievement motivation group children. But children of both groups did not vary significantly in their general anxiety. However, the mean scores on test anxiety of high and low achievement motivation group children of class **III**, **IV**, and **V** give a clear picture that high

achievement motivation children have a lesser amount of test anxiety and their test anxiety decreases with higher educational level. The low achievement motivation group children failed to exhibit the same trend. It was also clear from Table 2 that there are variations in the children's academic achievement with varying degrees of general anxiety and test anxiety irrespective of the achievement motivation level. On the basis of the mean scores of children it is not possible to generalise. Therefore, the scores were subjected to 2 (achievement motivation level — High and Low) X 3 (Educational level — Class III, IV and V) analysis of variance. The summary of the analysis of variance has been presented in Table 3.

Table 2  
MEAN AND SDs OF CHILDREN WITH VARYING EDUCATION AND MOTIVATION LEVEL ON ACADEMIC ACHIEVEMENT SCORES IN SCHOOL EXAMINATION GENERAL ANXIETY AND TEST ANXIETY

	<i>High Motivation Group</i>			<i>Low Motivation Group</i>		
	<i>Educational Level</i>			<i>Educational Level</i>		
	<i>III</i>	<i>IV</i>	<i>V</i>	<i>III</i>	<i>IV</i>	<i>V</i>
<b><i>Academic Achievement</i></b>						
Mean	52.696	55.312	53.027	47.800	46.719	46.618
S.D.	8.564	10.827	10.931	10.579	8.020	7.618
<b><i>General Anxiety</i></b>						
Mean	21.870	25.906	20.378	21.840	25.406	21.471
S.D.	4.184	4.739	4.321	4.593	4.756	5.214
<b><i>Test Anxiety</i></b>						
Mean	18.261	16.875	12.622	17.040	22.906	15.353
S.D.	5.765	6.763	6.223	7.603	6.007	6.962

A perusal of Table 3 has made it clear that academic achievement of children is significantly affected by children's achievement motivation level ( $F=22.029$ ;  $df=1,177$ ;  $p < 0.01$ ). The significant  $F$  value of 22.029 for  $df$  1,177 indicates that the children with high achievement motivation performed better in comparison to those who had low achievement motivation. But the effect of educational level and interaction effect of educational level and achievement motivation level did not reach the significance level of 0.05. The  $F$  values were less than 1 in these cases.

Table 3

SUMMARY OF 2 (HIGH AND LOW ACHIEVEMENT MOTIVATION) X 3 (REDUCTIONAL LEVEL) ANALYSIS OF VARIANCE OF ACADEMIC ACHIEVEMENT, GENERAL ANXIETY AND TEST ANXIETY

Source of Variance	SS	DF	MS	F
<b>Academic Achievement</b>				
A. Educational Level	41.147	2	20.573	0.217
B. Achievement Motivation Level	2091.288	1	2091.288	22.029**
A X B	105.333	2	52.666	0.555
Error <sub>w</sub>	16803.216	177	94.933	
<b>General Anxiety</b>				
A. Educational Level	820.957	2	410.478	18.220**
B. Achievement Motivation Level	3.642	1	3.642	0.162
A X B	21.506	2	10.753	0.477
Error <sub>w</sub>	3987.579	177	22.529	
<b>Test Anxiety</b>				
A. Educational Level	1222.819	2	611.409	13.685**
B. Achievement Motivation Level	401.280	1	401.280	8.982**
A X B	330.771	2	165.385	3.702*
Error <sub>w</sub>	7908.081	177	44.678	

Notes :

\*\*  $p < .01$

General Anxiety

$t_{1,2}=4.196^{**}$

$t_{1,3}=1.074$

$t_{2,3}=5.813$

\*  $p < .05$

Test Anxiety

$t_{1,2}=1.776$

$t_{1,3}=2.958^{**}$

$t_{2,3}=5.174^{**}$

In case of general anxiety the main effect for the educational level of children was significant ( $F=18.220$ ;  $df=2,177$ ;  $p < 0.01$ ). The mean difference of 3.802 and 4.755, between class III and IV children respectively, were significant at the 0.01 level ( $t_{1,2}=4.196$ ;  $t_{2,3}=5.813$ ). The significant mean differences indicated that class IV children were having more anxiety in anxious situations such as health problems, personal adequacy, safety of their family members, physical harm and so on as compared to class III and V children. However, the main effect of achievement motivation and interaction effect between educational level and achievement motivation were not significant.

Education and achievement level of children were found responsible for scores on test anxiety. The F value of 13.685 and 8.982 were

obtained for the education and achievement motivation level respectively. The mean difference of 3.695 and 5.961, between class IV and V respectively, were significant at the 0.01 level ( $t_{1,2}=2.958$  and  $t_{2,3}=5.174$ ). The significant mean difference indicated that class IV children were having anxiety in examination and examination-like situations as compared to class III and V children. Children under high motivation set higher standards and work harder to achieve those standards. These things also determine the magnitude of test anxiety ( $F=8.982$ ;  $df=1,177$ ;  $p < 0.01$ ). The significant  $F$  value of 8.982 indicates that children with low achievement motivation are having a high degree of test anxiety as compared to children with high achievement motivation. In this regard an explanation seems to be in order that children with high achievement motivation keep a proper account of their efforts and assessment to achieve the goal. Therefore, at the time of evaluation made by others, they have a low examination anxiety due to confidence over their performance.

Significant interaction effect was found between educational level and achievement motivation of children on examination anxiety ( $F=3.702$ ;  $df=2,177$ ;  $p < 0.05$ ). Observation of means presented in Table 2 indicates that there is a disordinal interaction between two variables. The children who possessed low achievement motivation and were reading in class IV and V showed greater examination anxiety as compared to those having high achievement motivation and studying in the same classes. The situation is just the opposite in case of class III children.

An insightful observation of values presented in Tables 2 and 3 reflect that the academic achievement of children is influenced by examination anxiety. When children have a high level of achievement motivation and a low examination anxiety, they secure good scores in their examinations as compared to those who have low achievement motivation accompanied with high examination anxiety.

In order to give a clear picture of the relationship among general anxiety, test anxiety and academic achievement of high and low achievement motivation children of class III, IV and V, correlation coefficients were also worked out. An attempt was made to measure the dependability of the relationships. The correlation coefficient and dependability scores are presented in Table 4.

Inter-correlations between academic achievement, general anxiety, and test anxiety for high and low achievement motivation groups of class III were -0.857, 0.796, -0.136 and -0.329 respectively. The

Table 4  
CORRELATION AMONG ACADEMIC ACHIEVEMENT, GENERAL ANXIETY AND EXAMINATION ANXIETY WITH DEPENDABILITY (IN PERCENTAGE)

Class and Achievement	High Achievement Motivation		Low Achievement Motivation	
	General Anxiety	Examination Anxiety	General Anxiety	Examination Anxiety
<b>Class III</b>				
Achievement	-0.857** (48.47)	0.796*** (39.47)	-0.136 (00.90)	-0.329 (05.56)
<b>Class IV</b>				
Achievement	-0.527** (15.00)	-0.225 (02.60)	-0.203 (02.08)	0.086 (00.37)
<b>Class V</b>				
Achievement	-0.085 (0.36)	-0.802** (40.26)	0.036 (0.06)	0.361* (06.74)

Notes : Percentage of dependability in parenthesis

\*\*  $p < 0.01$ , \*  $p < 0.05$

correlation value of -0.857 and 0.796 were significant. The significant negative correlation was found between academic achievement and general anxiety scores. The correlation coefficient between academic achievement and test anxiety was positive and significant ( $r=0.796$ ). The significant positive correlation made it clear that academic achievement and test anxiety depend on each other. However, these two measures do not make any significant contribution to academic achievement in case of low achievement motivation group of class III children. Significant and negative correlation was found between general anxiety and academic achievement of high achievement motivation group children of class IV ( $r = -0.527$ ). The correlation between test anxiety and academic achievement of high achievement motivation group and correlation between academic achievement and general anxiety of low achievement motivation group of class IV children were negative, but these correlation coefficients failed to reach significant levels. In case of high achievement motivation group children of class V, test anxiety is negatively correlated with academic achievement. A significant negative correlation coefficient of -0.802 was found between test anxiety and academic achievement of high achievement motivation group children, whereas low achievement motivation group children of the same class showed positive relationships between test anxiety and academic achievement ( $r=0.361$ ).

On the basis of the dependability score, it can be stated that academic achievement of high achievement motivation group of class III depends 48.47 per cent on general anxiety and 39.47 per cent on examination anxiety. The dependability percentage of general anxiety for academic achievement of high achievement motivation group children is decreasing when they move to higher classes. Academic achievement of low achievement motivation group children depends poorly on general anxiety and test anxiety.

A close scrutiny of the findings of this study made it clear that high achievement motivation group children are better in academic achievement. They do not differ in general anxiety but they have less amount of examination anxiety. Besides, the level of examination anxiety of the children also decreases with move to higher classes. Education and achievement motivation level of children are responsible for their examination anxiety. A disordinal interaction takes place between educational and achievement motivation level. Academic achievement of high achievement motivation group children of class III was significant and negatively correlated with general anxiety and positively with examination anxiety. Academic achievement of these children greatly depend upon their examination anxiety and general anxiety. In case of class IV students, academic achievement was negatively correlated with general anxiety. Class V children showed negative correlation between academic achievement and examination anxiety. As regards low achievement motivation group children of classes III, IV and V, the correlation coefficient between academic achievement and general anxiety, and for academic achievement and examination anxiety were poor. Only one correlation was found significant and positive in case of class V children. Academic achievement is greatly dependent on examination anxiety.

Certain educational implications can be visualised on the basis of these findings. For example, in order to increase academic achievement and reduce anxiety level among school children, it is imperative that children be trained in having a high achievement motivation, realistic goal settings, and achievement striving. These training activities can be operated by their teacher through behaviour and planned intervention. Simultaneously, the teacher should be success oriented and less anxiety oriented, particularly with children at lower educational levels. At the primary level it is necessary in view of dependability of the measures of anxiety and achievement.

## REFERENCES

- Ahluwalia, 1985 : *A Study of Factors Affecting Achievement Motivation*. Unpublished Doctoral Thesis, Agra: Agra University.
- Bartel, N. 1971 : Locus of Control and Achievement in Middle and Lower Class Children, *Child Development*, 42, 1099-1107.
- Buch, M.B. 1984 : *Third Survey of Research in Education (1978 - 83)*, New Delhi: National Council of Educational Research and Training.
- 1989 : *Fourth Survey of Research in Education (1978 - 83)*, New Delhi: National Council of Educational Research and Training.
- Cohen, L. 1976 : *Educational Research in Classroom and Schools: A Manual of Materials and Methods*, New York: Harper and Row.
- English, H.B. and English, A.C. 1958 : *A Comprehensive Dictionary of Psychological and Psychoanalytic Terms*, New York: Longmans.
- Feather, N.T. and Simon, J.G. 1973 : Fear of Success and Causal Attribution for Outcome, *Journal of Personality*, 41, 525-542.
- Horner, M.S. 1978 : The Measurement and Behavioural Implication of Fear of Success in Women. In J. Alkinson and J. Raymor (Eds.), *Personality, Motivation and Achievement*, New York: John Wiley and Sons.
- Mishra, K.N. 1992a : A Comparative Study of Achievement Motivation and Scholastic Achievement in Relation to Self Concept, *The Indian Journal of Social Work*, 53(1), 139-142.
- 1992b : Role of Sex and Self Concept on Achievement Motivation, *The Educational Review*, 98 (2), 193-196.
- Mohanani, L., Kuhn, D. and Shaver, P. 1974 : Intrapyschic Versus Cultural Explanation of the Fear of Success Motive, *Journal of Personality and Social Psychology*, 19, 61-64.
- Mohanty, C. 1985 : *Effect of State Trait Anxiety on Classroom Learning and Personal Adjustment of Elementary School Pupils*. Unpublished Doctoral Thesis, Bhubaneshwar: Utkal University.
- Nayak, B.P. 1992 : *Achievement Motivation and Level of Aspiration of Tribal and Non-Tribal Children in the Age Group of 7-11*. Unpublished Doctoral Thesis, Bhubaneshwar: Utkal University.
- Panda, R. 1990 : *Anxiety, Achievement Motivation, Security-Insecurity, and Cognitive Processing Among Scheduled Castes, Scheduled Tribes and Non-Tribal School Children*. Unpublished M.Ed. Thesis, Bhubaneshwar; Utkal University.
- Purandare, V.M. 1984 : *Anxiety and Strategies in Serial Verbal Learning*. Unpublished Doctoral Thesis, Pune: University of Poona.

- Rath, S.**  
**1991** *An Individualised Instruction Training Approach for Teaching Children with Learning Difficulties in Reading and Comprehension.* Unpublished M.Phil. Thesis, Bhubaneswar: **Utkal** University.
- Ray, P.**  
**1982** *Effects of Attribution Training on the Development of Intellectual Achievement Responsibility and Cognitive Performance Among Lower Class Children.* Unpublished Doctoral Thesis, Bhubaneswar: Utkal University.
- Santra, S.C.  
**1991** *Self-perception, Parental Aspiration, Ability and School Achievement of Tribal (Santhal) Elementary School Children.* Unpublished Doctoral Thesis, Bhubaneswar: Utkal University.
- Sarason, S.B.,  
Davidson, R.S.  
Lighthall, F.F. and  
Waite, R.R.  
1958 *A Test Anxiety Scale for Children, Child Development,* 29,105-113.
- Saranson, S.B.,  
Davidson, K.S.,  
Lighthall, F.F.,  
Waite, R.R. and  
Ruebuch, B.K.  
1960 *Anxiety in Elementary School Children: A Report of Research,* New York: John Wiley and Sons.
- Singh, R.  
1986 *An Investigation into the Relationship Between Achievement Motivation, Intelligence (General Mental Efficiency), Introversio-Extroversio, Achievement in Mathematics and a Comparison thereof Between Haryana and Delhi Students Belonging to Various Socio-cultural Strata.* Unpublished Doctoral Thesis, New Delhi: Jamia Millia Islamia.
- Tripathi, R.C.  
1986 *Achievement Motivation and Correlates of High School Students of East UP.* Unpublished Doctoral Thesis, Gorakhpur: Gorakhpur University.