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## Proficiency in motor educability and its impact on academic achievement of adolescent boys of Jammu and Kashmir

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### Abstract

This study has been conducted to assess the impact of motor educability on academic achievement of adolescent boys of Jammu and Kashmir. To conduct the study, 250 adolescent boys studying in various schools operational in the State of Jammu and Kashmir were selected as sample. In all 50 adolescent boys from age group 13+ years age, 14+ years age, 15+ years age, 16+ years age and 17+ years age were selected randomly. Motor educability of selected subjects was assessed with the help of modified version of Johnson's test of motor educability (1932) consisting of items such as front roll, back roll, jumping half turns and jumping full terms. Academic achievement of selected subjects was assessed with the help of previous year marks. In order to distribute adolescent boys in high, average and low level of motor educability, quartile methods was used. One Way ANOVA showed significantly superior academic achievement in adolescent boys exhibiting higher magnitude of motor educability as compared to adolescent boys exhibiting average and low level of motor educability. It was concluded that motor educability is strongly associated with academic achievement of adolescent boys.

**Keywords:** Motor educability, adolescent, academic achievement

### 1. Introduction

Motor educability in general refers to learning new motor skills with relative ease. Learning is attaining innovative or amending existing knowledge, skills etc. Learning also encompasses different types of information. According to Adams (1976)<sup>[1]</sup> motor learning is a progression of acquiring, mastering and applying motor information to execute certain easy or complex motor movements. It is closely associated with cognitive abilities, mental prowess of an individual.

In India great emphasis is placed on academic achievement. This is not unusual because of its importance for adolescent to get better chances for studies in higher education institutions. Due to so much importance of academic achievement in India researcher have conducted studies to ascertain the factors associated with it. In this relation association of motor coordination was observed by Planinsec (2006)<sup>[5]</sup> with intelligence. Similarly Sparrow (1993)<sup>[7]</sup>, Goldstein *et al.* (1994)<sup>[3]</sup>, Bonifacci, P. (2004)<sup>[2]</sup>, Howie and Pate (2012)<sup>[4]</sup>, Sandeep *et al.* (2018)<sup>[6]</sup> studied motor educability in relation to intelligence. But academic achievement although related with intelligence is little bit different because achievement is based on knowledge or acquired skills. Hence the researcher decided to assess academic achievement of adolescent boys in the light of their proficiency in motor educability.

### 1.1 Objectives

The objective of the present study is to assess the impact of motor educability on academic achievement of adolescent boys.

### 1.2 Hypothesis

It was hypothesized that grades of motor educability will significantly influence academic achievement of adolescent boys.

### 2. Methodology

The following methodological steps were taken in order to conduct the present study.

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## 2.1 Sample

To conduct the study, 250 adolescent boys studying in various schools operational in the State of Jammu and Kashmir were selected as sample. In all 50 adolescent boys and girls from age group 13+ years age, 14+ years age, 15+ years age, 16+ years age and 17+ years age were selected randomly.

## 2.2 Tools

### Motor Educability Test

Motor educability of selected subjects was assessed with the help of modified version of Johnson's test of motor educability (1932) consisting of items such as front roll, back roll, jumping half turns and jumping full terms. This test is highly reliable and valid.

### Academic Achievement

Academic achievement of the selected subject will be assessed by grade marks obtained in previous year examination.

## 2.3 Procedure

- 250 adolescent boys between 13 to 17 years age were selected randomly from schools operational in Jammu

and Kashmir.

- After following ethical consideration, the selected subjects performed all four items of Johnson's motor educability test. The scores on each item were summed up.
- The final academic grade marks were obtained from respective schools records.
- To distribute subjects with high, average and low level of motor educability,  $Q_1$  and  $Q_3$  statistical technique was used. The 25th percentile score on motor educability test was 19.00 while the 75th percentile score was 32. The scores of adolescent boys falling above P75 ( $Q_3$ ) were considered as high level of motor educability, scores lying below P25 ( $Q_1$ ) were considered as low level of motor educability while scores between the above quartile treated as average level of motor educability. To compare academic achievement of adolescent boys so distributed in high, average and low motor educability group, One Way ANOVA and Least Significant Difference Test was used. The results are presented in table 1 and 2 respectively.

## 3. Results

**Table 1:** Descriptive Statistics of Scores on Academic Achievement among Adolescent Boys with Varying Degree of Motor Educability (N=250)

Groups	N	Academic Achievement	
		Mean	S.D.
Adolescent Boys - High Motor Educability	65	85.16	15.67
Adolescent Boys - Average Motor Educability	120	74.72	16.12
Adolescent Boys - Low Motor Educability	65	67.61	15.44
F=20.31, p<.01			

The F=20.31 shown in table 1 indicate that academic achievement of adolescent boys exhibiting high level of motor educability ( $M=85.16$ ), average level of motor educability ( $M=74.72$ ) and low level of motor educability ( $M=67.61$ )

differ significantly.

The obtained result shown in table 1 was also confirmed by Least Significant Difference Test presented in table no. 2.

**Table 2:** Comparison of Mean Scores on Academic Achievement in a Group of Adolescent Boys with High, Moderate and Low Motor Educability (N=250) Least Significant Difference Test with Significance Level .05

Mean (I)	Mean (J)	Mean Difference (I-J)
Adolescent Boys with High Motor Educability	Adolescent Boys with Moderate Motor Educability	10.44*
	Adolescent Boys with Low Motor Educability	17.55*
Adolescent Boys with Moderate Motor Educability	Adolescent Boys with Low Motor Educability	7.10*

\* Significant at .05 level

Statistical data shown in table 2 gives following inferences:

- Academic achievement of adolescent boys with high level of motor educability was found to be significantly superior as compared to adolescent boys exhibiting average and low level of motor educability. The mean difference of 10.44 and 17.55 was found to be statistically significant at .05 level.
- Academic achievement of adolescent boys with average level of motor educability was found to be significantly superior as compared to adolescent boys exhibiting low level of motor educability. The mean difference of 7.10 was found to be statistically significant at .05 level.

On the basis of analysis of data, following results are obtained:

## 4. Discussion

Results clearly state the strong influence of motor educability on academic achievement of adolescent boys. This is not surprising because academic achievement is final outcome

based on knowledge or acquired skills. Similarly motor educability is related to cognitive abilities and defined as learning new motor skills with relative ease. Hence adolescent subjects with more proficiency to acquire new motor skills are also adept at gaining knowledge in the field of academics.

## 5. Conclusion

On the basis of results, it can be concluded that proficiency in motor educability may predict academic excellence of adolescent boys. It may also be concluded that both academic and motor proficiency are dependent on learning new skills or knowledge, hence they are inter-related with each other.

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