



## RESEARCH ARTICLE

### EFFECT OF INTELLIGENCE AND MOTOR SKILL LEARNING UPON ADOLESCENT BOYS

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#### ARTICLE INFO

**Article History:**

Received 28<sup>th</sup> April, 2018  
Received in revised form  
22<sup>nd</sup> May, 2018  
Accepted 14<sup>th</sup> June, 2018  
Published online 30<sup>th</sup> July, 2018

**Key Words:**

Intelligence,  
Motor Skill Learning,  
Adolescent Boys.

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**Citation:** Dr. Madan Lal Kurre, 2018. "Effect of intelligence and motor skill learning upon adolescent boys", *International Journal of Current Research*, 10, (07), 71051-71052.

#### ABSTRACT

The present study was aimed to see the effect of intelligence and motor skill learning upon adolescent boys. For the present study, 100 boys from age group i.e. 12,13,14 and 15 years respectively were selected from various schools of Chhattisgarh. In all 400 adolescent boys were selected. To assess motor educability of adolescent boys Johnson's test of motor educability (1932) was used. While intelligence, Malhotra's (1984) Mixed Type Group Test of Intelligence (MGTI) was used. The results reveal that to verify hypothesis "Significant positive relationship will be observed in motor skill learning of selected subjects with their cognitive ability i.e. intelligence" of adolescent boys. Pearson correlation coefficient was calculated.

#### INTRODUCTION

Motor learning/educability is a process of acquiring, completing and using motor information, knowledge, experience, and motor programmes (Adams, 1976). It is closely connected with mental abilities, motor abilities and cognitive characteristics of an individual. "Intelligence is not a single, unitary ability, but rather a composite of several functions. The term denotes that combination of abilities required for survival and advancement within a particular culture." (Anastasi, 1992) "An intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings" (Gardner, 1993). Researchers such as Deiber (1997), Sakai et al. (1998), Planinsec J. (2006), Belinda Ekornas et al. (2010) etc. Have conducted studies related with motor learning governing various aspects but so far, researchers have not studied the effect of brain hemisphere domination upon motor skill learning among adolescent girls. Hence, the present study was planned to investigate the effect of brain hemisphere domination upon motor skill learning of adolescent girls. The developing child. (9th ed.). Boston: Allyn and Bacon). Research shows that the speed with which people are able to retrieve information is related to intelligence.

In general people with higher IQ scores react quickly on the information processing and perceptual task (Hunt, 1997). Studies have shown that during perceptual tasks, right hemisphere is more activated so intelligent people may have more specialized right hemisphere (Barlow, 2001). Intelligence is not a consistent construct from the birth till the death. There are different factors, which contribute to the inconsistent nature of IQ.

**Hypothesis:** It was hypothesized that Significant positive relationship will be observed intelligence and motor skill learning of selected subjects with their cognitive ability i.e. intelligence" of adolescent boys. .

#### METHOD AND MATERIAL

To test the abovementioned hypothesis. Following methodological steps were taken.

**Sample:** For the present study, 100 adolescent boys from age group i.e. 12,13,14 and 15 years respectively were selected from various schools of Chhattisgarh. In all 400 adolescent boys and girls were served as sample for the present study.

**Tools:** To conduct the study following tools were used.

**Motor Educability Test:** To assess motor educability of adolescent boys Johnson's Test of motor educability (1932) was used. it is useful for age group II to adulthood. The tests

items are Straddle jump. Stagger skip. Stagger jump. Forward skip holding opposite foot from behind. Front roll, Jumping half turns, right and Left alternately. From and back roll combination . Jumping full runs respectively. The test has a validity of .65.

**Mixed Type Group Test of Intelligence (MGTI):** To measure intelligence, Malhotra's (1984) Mixed Type Group Test of Intelligence (MGTI) was used. This test has two parts i.e. verbal and non verbal intelligence test. Both the parts have 50 statements. The test-retest reliability of the verbal test is 0.89, for non verbal test . it is 0.82 while full test reliability coefficient is 0.86. The validity verbal test is .86 and for non verbal test it is 0.72 while the overall validity of the test is 0.87 when it was correlated with teacher's ratings. (Appendix B)

**Procedure:** Selected boys and girls between age group 12 to 15 from various schools of Chhattisgarh state, were subjected to the aforementioned tools in a laboratory like condition. First of all the Johnson's Test of motor educability (1932) was administered to each subject and the Mixed Type Group Test of Intelligence was administered to each subject as instructed given by the author. The scoring was done as per the instruction manual provided with each test. The scores on MGTI were scored off as per the scoring key provided with the manual while motor skill learning scores was obtained for each subjects by adding the scores on all the 10 test items. After scoring, the data was arranged according to their respective groups and put to statistical treatment for verification of hypotheses. To find out the effect of intelligence and motor skill learning (positive correlation) upon adolescent boys Pearson correlation was used.

#### Analysis and interpretation:

##### Relationship of Intelligence with Motor Educability among Selected Subjects (N=400)

|                         | Motor Educability |
|-------------------------|-------------------|
| Verbal Intelligence     | 0.4294**          |
| Non Verbal Intelligence | 0.4468**          |
| IQ                      | 0.5704**          |

Correlation matrix shown in table clear showing statistically significant positive correlation between intelligence and motor educability of selected subjects.

The reported correlation coefficient between motor educability and verbal intelligence ( $r=0.4294$ ), motor educability and non verbal intelligence ( $r=0.4468$ ) and motor educability with IQ ( $r=0.5704$ ), all of which are statistically significant at .01 level indicative of fact that as value of one variable increases, another also increases significantly.

## DISCUSSION

The results of the present study is a positive and significant relationship is observed between intelligence and motor educability. It is observed that increase in intelligence scores automatically have increase in motor educability scores too. intelligence emerged as two important factors influencing the motor educability of adolescent boys. Hence the results of the present study showing the importance of hemisphericity and intelligence in influencing the motor learning in adolescent boys.

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