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Effect of Brain Hemisphere Domination upon Motor Skill Learning of Cast

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Abstract

The present study was aimed to see the effect of brain hemisphere domination upon motor skill learning of adolescent girls. For the present study, 100 girls from age group i.e. 12, 13, 14 and 15 years respectively were selected from various schools of Chhattisgarh. In all 400 adolescent girls were selected. To assess left, right and integrated dominance of brain, Brain Dominant Hemisphere Test (B.H.D.T), prepared by Agashe and Helode (2007) was used while motor educability of selected subjects was evaluated by Johnson's test of motor educability (1932). The results reveal that motor skill learning of General Cast Boys with integrated brain hemisphere domination was found to not significantly higher than the motor skill learning of Other Cast Boys with left and right brain hemisphere domination. It was concluded that brain hemisphere domination not influence the motor skill learning of Cast.

Keywords: brain hemisphere domination, motor skill learning, Cast, adolescent.

Introduction

The brain can be described as being divided into left and right cerebral hemisphere. In general the left and right hemisphere of our brain process information in different ways. Humans tend to process information using their dominant side. It was also found in studies that learning is enhanced when both sides of the brain is used while performing a work. 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. Researchers such as Dauber (1997), Sakai et al. (1998), Plainness 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 Cast, Hence, the present study was planned to investigate the effect of brain hemisphere domination upon motor skill learning of Cast.

Hypothesis

It was hypothesized that motor skill learning of General Cast Boys with integrated brain dominance will be significant better as compared to motor skill learning of Other Cast Boys with left and right brain hemisphere domination.

Method And Material

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

Sample

For the present study. 100 General Cast Boys and 100 Other Cast Boys from age group i.e. 12, 13, 14 and 15 years respectively were selected from various schools of Chhattisgarh. In all 400 adolescent Cast were served as sample for the present study.

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Tools

To conduct the study following tools were used.

Brain Hemisphere Domination Test: To assess domination of left or right side of the brain. Brain Dominant Hemisphere Test (B.D.H.T.) prepared by Agashe and Helode (2007) was used.

Motor Educability Test: To assess motor educability of Cast 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.

Procedure

Selected boys between age group 12 to 15 from various school of Chhattisgarh state were subjected to the aforementioned tools in a laboratory like condition. First of all the Brain Hemisphere Domination test was administered to each subject. The motor educability test of Johnson (1932) was administered to each subject as per their convenience during school hours. The scoring was done as per the instruction manual provided with each test.

To find out the brain hemisphere dominance. i.e. left, right and integrated brain hemisphere dominance. The scores are divided by 12, as suggested by the authors of the manual. Percentile norms for these BHDT scores were obtained and the scores while fall below 25th percentile were considered as right dominant brain hemisphere. The score between 25th and 75th percentile were considered as integrated brain hemisphere dominance. By this method brain hemisphere dominance of each subject was ascertained. The motor skill learning scores was obtained for each subjects by adding the scores on all the 10 test items.

To find out the effect of brain hemisphere dominance (Left, Right and Integrated) upon motor skill learning, independent sample ‘T’ test was used.

Analysis and Interpretation

Table 1 Comparison of Motor Educability among Selected Subjects on the Basis of their Caste

Groups	Mean	S.D.	‘t’
General (N=70)	54.08	9.08	1.61(NS)
Other Caste (N=330)	52.16	8.85	

NS - Not Significant

No significant difference is observed on selected subject’s motor educability on the basis of their caste. The reported t=1.61, which is statistically insignificant signifies that motor educability of subjects from general caste (M=9.08) and other caste (M=8.85) is significantly not different from each other. (Table 1)

Discussion

The results of the present study is in line with the dynamic dominance hypothesis of motor control, which assumes that voluntary movements are controlled by two specialised brain hemisphere/limb systems. Each stabilising different of task performance (Sainburg & Kalakanis, 2000). The findings of the present study is consistent with the study of

Planinsec J. (2006) who found positive correlation between motor coordination and intelligence. Hence, it is natural that when both sides of the brain is utilised equally and transfer of information between two hemisphere is good the person’s motor learning skill is also good.

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