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Dr. S Sethu

Assistant Professor, Department of Physical Education and Sports, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India

R Ramakrishnan

Research Assistant ICSSR Major Project, Department of Physical Education and Sports, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India

Analysis of short form test on manual dexterity ability between boys and girls aged 6-8 years

Dr. S Sethu and R Ramakrishnan

Abstract

The purpose of the study was to analysis the short form test on manual dexterity abilities between boys and girls among School Children. For this purpose, Two hundred (n=200) children were selected from Sri Sarada Higher Secondary School and Little Flower Higher Secondary School, Tirunelveli, Tamil Nadu, India. The Subjects age ranged between 6 to 8 years. The selected subjects were divided into two groups of hundred subjects each namely boys and girls. The selected manual dexterity abilities were assessed by using the standardized test such as Bruininks – Oseretsky test for Motor Proficiency Second Edition- (BOT-2). The collected data on the selected variables were treated with independent “t” test at 0.05 level of significance. The results of the study indicated that there was a significant difference on manual dexterity abilities. Further boys found better when compared with girls on Manual Dexterity.

Keywords: Short form test on Manual dexterity, BOT-2

Abbreviations: BOT-2 Bruininks – Oseretsky test for Motor Proficiency Second Edition

Introduction

Motor proficiency is determined by qualitatively different aspects of both gross and fine motor development and serves as an index of children’s motor development (Bruininks, 1978) [2]. According to (Bruininks, 1978) [2] is made up of four motor area composites such as fine manual control, manual coordination, body coordination and strength & agility.

Manual coordination involving motor skills concerning arms and hands control and coordination, in particular for object manipulation (Deitz, Kartin, & Kopp, 2007) [4].

The influence of the postural control of the trunk and center of the body on fine manual dexterity ability is a common assumption (Shumway-Cook, & Woollacott, 1995) [10]. The reciprocal relations between posture and fine manual dexterity is evident in descriptions regarding the developmental sequence of acquiring movement control (Case-Smith, Fisher, & Bauer, 1989; Gilfoyle, Grady, & Moore, 1990; Pedretti, & Early, 2001) [3, 5, 9].

Manual dexterity can be described as the ability to perform complex and precise movements of the hands with fluency, accuracy and speed according to the children’s developmental age. The acquisition of adequate manual dexterity enables a child to learn new skills and to perform tasks efficiently without excess effort (Jenkinson, Hyde, & Ahmad, 2008) [6].

Purpose of the Study

The purpose of the study was to analyse the short form test on manual dexterity abilities between boys and girls among School Children

Methodology

The purpose of the study was to analysis the short form test on manual dexterity abilities between boys and girls among School Children. For this purpose, Two hundred (n=200) children were selected from Sri Sarada Higher Secondary School and Little Flower Higher Secondary School, Tirunelveli, Tamil Nadu, India. The Subjects age ranged between 6 to 8 years. The selected subjects were divided into two groups of hundred subjects each namely boys and girls. The selected manual dexterity ability were assessed by using the standardized test such as Bruininks - Oseretsky test for Motor Proficiency Second Edition- (BOT-2). The collected data on the selected variables were treated with independent “t” test at 0.05 level of significance.

Correspondence

Dr. S Sethu

Assistant Professor, Department of Physical Education and Sports, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India

Analysis of Data

Table 1: The summary of mean and independent t-test values boys and girls on manual dexterity

Variable	Group	Number	Mean	S.D	T- Ratio	Sig.
Manual Dexterity Ability	Boys	100	7.09	1.61	3.13*	.002
	Girls	100	5.82	1.62		

*Significant at .05 Level. Table value required for significance at .05 levels for 't' with 198 is 1.98. (Scores are represented in points for the selected variables).

The t-test value of df 198, Manual Dexterity Ability 3.13 ($p = .002$), This means that the boys and girls had significant difference on short form test on manual dexterity ability namely transferring pennies. However, boys outperformed than girls school children on transferring pennies.

Discussion on Findings

The result of the study indicates that the boys and girls had significant difference on short form test on manual dexterity abilities namely transferring pennies. However, boys outperformed than girls school children on transferring pennies. The present findings of the study is confirmed by the studies conducted already related this area such as Webber, Wood, Gole, & Brown, (2008b) ^[11]; Klein, Guiltner, Sollereeder, & Cui, (2011b) ^[7]; Berg, Becker, Martian, Danielle, & Wingen, (2012) ^[1]; Lin, Cherng, & Chen, (2017) ^[8];

Conclusions

- The boys and girls children had significant difference on manual dexterity ability.
- Boys performed better than girls on Manual dexterity.
- Generally Boys received more activity rather than studies so they have good ability in manual dexterity ability on object. With this we recommend teachers and parents to provide environment to develop their motor proficiency abilities.

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