



IMPACT OF MODEL PHYSICAL EDUCATION CURRICULUM ON DEXTERITY AND SINISTRALITY AMONG 13 YEARS PREADOLESCENT SCHOOL BOYS

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ABSTRACT

The purpose of the study was to find out the effect of model physical education curriculum on dexterity and sinistrality among 13 years preadolescent school boys. For that purpose 40 right handed dominance preadolescent students from Dream Land educational institute high school Kulgam Jammu and Kashmir India were selected as subjects. 13 years preadolescent school boys were selected as subjects. The subjects were divided into two groups (n=20), the experimental group and control group. The model physical education curriculum was implemented on the experimental group. The curriculum contains four parts A (the physical exercises), B (the yogic asana), C(the theoretical part) and part 'D' (the recreational part).The experimental group underwent training for 15 weeks, 4 days a week and 45 minutes per class including warming-up and cooling down exercises. The visual reaction speed on left and right hand were selected as dependable variable was and tested before and after experimental period. The collected data was analyzed by using ANCOVA. Level of significance was fixed at 0.05. The result of the study shows that the model physical education on curriculum helps in development of dexterity among preadolescent school boys.

Keywords: *Model physical education curriculum, Preadolescent, Dexterity, sinistrality.*

INTRODUCTION

Physical education is being driven by formal and informal rules which engross competition and sometimes recreation for promoting a strong way of life practices. Physical education is typically classified as a part of education which enhances the students to achieve healthy and fit lifestyle in all aspects (**Drewe 2001**). The only aim of physical education is not only substantial advancement but also edification of the whole individual through physical actions. The physical education will add to the progress of general ability as well as optimistic values and attitudes, especially perseverance and sportsmanship (**Barkan et al 1973**). Physical education has always had an educational dimension of the substantial experience as its primary and leading target (**Freeman 2001**). Physical education is being driven by formal and informal rules which engross competition and sometimes recreation for promoting a strong way of life practices. The objective of the physical education is to develop physical, mental, social, skill oriented, career and emotional development through physical activity. The main objectives of physical education is to develop different parts of the body, set to develop a man socially, in place to enlarge the metal capacity, develops human on how to walk, jump, play, dance, run, ride and swim which are the basic skills needed in sports and games.

Physical education curriculum outlines daily activities to promote the child's abilities; therefore the need of physical education curriculum is very important for the child's development from early stages of school life which helps in the development of gross and fine motor abilities, ones the bio-motor abilities get developed which lateral help's in the development of dexterity among them(**Heilman 2005**).

Dexterity is skill in performing tasks, especially with the hands and skill in using ranged weapons. Dexterity may be also defined as fine motor skills by the way of coordination of small muscle movements which occur all over the body such as the fingers, usually in coordination with the eyes. Fine motor skills aid in growth of intelligence and develop continuously throughout the

stages of human development (Holder 2012). Dexterous refers to the skill and grace in physical movement, especially in the use of hands ‘adroitness’. It may be also defined as the ability to manipulate fine objects with the hands. The school physical education programme helps in the development of fine motor skills of hands like grasping power and finger flexibility. These physical training methods help in the development of fine motor skills and improve eye hand coordination. The training also improves visual skills by showing how to distinguish and associate between dexterous and motor co-ordination.

There are many terms used to refer to a left handed person, for example, “southpaw” or “goofy”. Some are just slang or jargon words, while other references may be offensive or demeaning, either in context or in origin (e.g. the British “cack-handed”). In more technical contexts, ‘sinistral’ may be used in place of left handed and ‘sinistrality’ in place of ‘left-handedness’. (Sinistral 2006).

METERIAL AND METHODS:

For that purpose 40 preadolescent students from Dream Land educational institute high school Kulgam Jammu and Kashmir India were taken as subjects. For the purpose of the study 13 years preadolescent school boys were selected as subjects. The subjects were divided into two groups (n=20), the experimental group and control group. The model physical education curriculum was implemented on the experimental group. The curriculum contains four parts ‘A’ (the physical exercises), ‘B’ (the yogic asana), ‘C’ (theoretical part) and ‘D’ (the recreational part).The physical exercises contain the simple exercises and some special exercises like Bouncing the basketball (right and left hand alternatively), Wall catching (right and left hand alternatively), Ball juggling (both right and left hand). The yogic part includes the asana like Dhanoor asana, Bhujang asana, Ananda Bal asana etc.

Every three weeks the load and intensity of exercises was increased by 5%; so that the physiological will adopt by the model physical education curriculum on speed development among Pre adolescents.

The model physical educational curriculum was implemented on the experimental group for 15 weeks, 4 days a week and 45 minutes per class including warming-up and cooling down exercises. The visual reaction speed were selected as criterion variable. The hand reaction reaction timer (chronometer) was selected as testing tool. The subjects were tested for speed of left and right hand with the help of chronometer. The data was collected from two groups left and right hand was statically examined by applying ANCOVA to find out significant difference. Level of significance was fixed at 0.05.

TABLE- 1

Test		Exper imental Group	C ontrol Group	So urce of Variance	S um of Squares	D egree of Freedo m	M ean Squar e	F value
P re Test	ean	0.151	0. 15	B	2. 812	1	2 .81	0. 06
	D	0.005	0. 006	W	0. 003	7 8	4 .06	
P ost Test	ean	0.136	0. 152	B	0. 005	1	0 .005	1 17.82*
	D	0.007	0. 005	W	0. 003	7 8	4 .21	
A				B	0.	1	0	



Adjusted post test mean	0.136	0.152		0.005		.005	1
			W	0.003	7	7	

*Significant

The table values of degree of freedom of 1 and 78 and 1 and 77 was 3.96 and 3.97

The table 4.36 shows that, the pre test mean value of experimental group and control group of visual reaction test for dextrality was 0.1517 and 0.1514 and the obtained 'F' value **0.06** which was less than the table value 3.96 of degree of freedom of 1 and 78 on visual reaction test for dextrality.

The post test mean value of experimental group and control group of chronometer test of dextrality was 0.136 and 0.152 and the obtained 'F' value was **117.82**, which was greater than the table value 3.96 of degree of freedom of 1 and 78 on visual reaction test for dextrality.

The adjusted post test mean value of experimental group and control group of visual reaction test for dextrality was 0.136 and 0.152 and the obtained 'F' value **121.52**, which was greater than the table value 3.97 of degree of freedom of 1 and 78 on visual reaction test for dextrality.

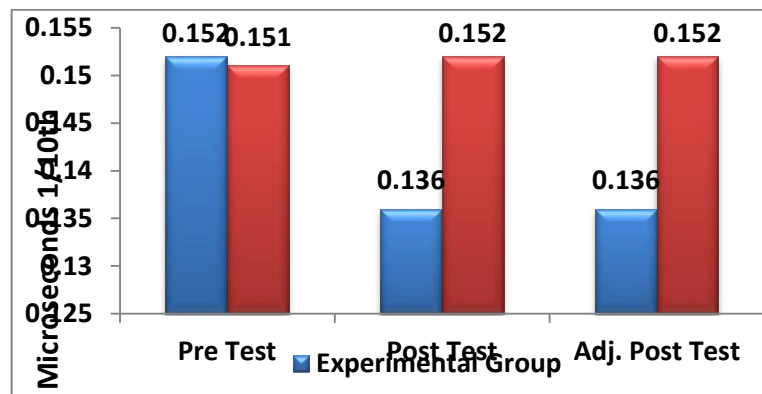


TABLE 2
VISUAL REACTION SPEED
(Sinistrality Visual Reaction Speed 13 year boys)

Test	Experimental Group	Control Group	Source of Variance	Sum of Squares	Degree of Freedom	Mean Square	F value
Pre Test	0.161	0.159	B	4.500	1	4.500	1.89
	0.005	0.005	W	0.002	8	0.275	
Post Test	0.151	0.158	B	0.001	1	0.001	2.03*
	0.002	0.005	W	0.001	8	0.125	
Adjusted post test	0.151	0.159	B	0.001	1	0.001	5.861*
			W	0.001	7	0.143	

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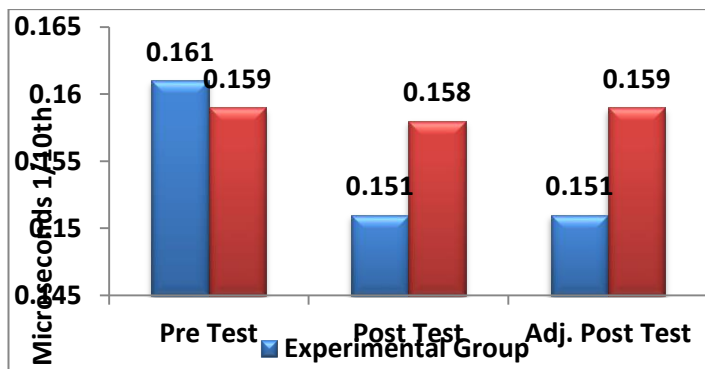
***Significant**

The table values of degree of freedom of 1 and 78 and 1 and 77 was 3.96 and 3.97

The table 4.37 shows that, the pre test mean value of experimental group and control group of visual reaction test for Sinistrality was 0.161 and 0.159 and the obtained 'F' value **1.89** which was less than the table value 3.96 of degree of freedom of 1 and 78 on visual reaction test for Sinistrality.

The post test mean value of experimental group and control group of visual reaction test for Sinistrality was 0.151 and 0.158 and the obtained 'F' **62.03**, which was greater than the table value 3.96 of degree of freedom of (1 and 78) on visual reaction test for Sinistrality.

The adjusted post test mean value of experimental group and control group of visual reaction test for Sinistrality was 0.151 and 0.159 and the obtained 'F' value **58.61**, which was greater than the table value 3.97 of degree of freedom of 1 and 78 on visual reaction test for Sinistrality.



RUSELT:

The result of above table 1 shows that, there was a significant difference between experiment group and control group on visual reaction test for dextrality among Under 13 boys. Further, the result shows that the experimental group shows better improvement on visual reaction test for dextrality when compared with control group.

The result of above table 2 shows that, there was a significant difference between experiment group and control group on visual reaction test for among Under 13 boys. Further, the result shows that the experimental group shows better improvement on visual reaction test for Sinistrality when compared with control group.

DISCUSSION:

The findings confirm that model physical education curriculum that includes the part A (Physical Exercises) Part B (Yogic Asana) Part C (Theoretical part) Part D (The Recreational Part) especially the physical exercises and yogic part has made a significant effect on speed. All these parts have a good impact on the neuromuscular system of the body which helps in the improvement of



dexterous among pre-adolescent school boys. The following findings of different researchers were in conformity with this study

CONCLUSION:

It was concluded that the model physical education curriculum which includes a set of exercises that helps in improving the visual reaction speed of dexterous hands. Hence the dominant hand shows better improvement on speed. The non-dominant hand has also improves speed when compared to base level.

IMPLICATION:

The results of the study give an idea that model physical education curriculum which contains a set of physical exercises and yogic asana which were implemented through proper and selected physical education curriculum plan in order to find the effect on dexterity and sinistrality. If an individual is heaving better dexterity and sinistrality qualities, they can able to do any sort of work with both hands simultaneously without getting tired. The findings of the study are helpful for physical educationists and coaches to enhance the dexterity and sinistrality of players who involved in various sports activities.. Being ambidextrous (using both hands) in sports activity is especially helpful during the competition.

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