Effect of Varied Specific Training on Physical Fitness Components Variables Among School Handball Players

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Abstract -The purpose of the study was to find out the effect of varied specific training on physical fitness components variables among school hand ball players. To achieve the purpose of the study, thirty (N-30) adolescent male handball players were randomly selected from boys government higher secondary school, Thondamuthur, Coimbatore, TamilNadu, India. Their age ranged between 14 and 17 years. They were divided into two equal groups consists of 15 each. The Group-I (n-15) was considered as experimental group. The Group-II (n-15) was considered as control group. The investigator did not made any attempt to equal the group. The experimental group was given varied specific training for three days per week and control group was not given a treatment. The experimental group was given training for period of six weeks of physical fitness components.

Key Words: physical fitness components, speed, agility, 50mts dash test, shuttle run-4x10 Test.

INTRODUCTION

Specificity is the principle of training that states that sports training should be relevant and proper to the sports for which the individual is training in order to produce a training successfully. The specificity principle minimally states that training must go from highly general training to decidedly exact training. The principle of specificity also indicates that to become strong again at a particular exercise or skill, one must carry out that exercise or skill. To be a good cyclist, one must cycle. The point to take away a runner should be trained by running and a swimmer should be trained by swimming (Hardayal Singh, 1991).

HANDBALL

The game of Handball involves skill movements because the game requires all the Fitness is said to be one of the life's ingredients for healthy living. All sports and games need a certain level of fitness to exhibits the skills of an individual and Handball players are no exception to this. Today the game Handball requires high energy, stamina and strength to play the game with else reaction speed drill is a system of training aimed at the development of motor abilities and the control of body movement through the development of the neuromuscular system. Handball is the sport and is becoming more and more popular in the world. The development of the game is also influenced by its attractiveness based in variable action and direct conflict with an opponent. An intense and permanent physical activity generates changes in the central nervous system and in the muscles as well as in the organs such as the heart, lungs, liver and kidneys. Several motor abilities such as sprinting, jumping, flexibility, and throwing velocity are considered as important aspects of the game that contribute to the high performance. (Nicolai, 1897).

Purpose of The Study

The purpose of the study was to find out the effect of six weeks of physical fitness components training on speed and agility of adolescent male handball player.

Hypothesis

It was hypothesised that Varied Specific training would have a better effect when compared with control group on the physical fitness components variables of adolescent male handball players.

METHODOLOGY

The purpose of the study was to find out the effect of varied specific training on physical fitness components variables among school handball players to achieve the purpose of the present study (N-30) adolescent male handball players from Thondamuthur, Coimbatore, Tamilnadu, India, were selected as subjects at random, and their ages ranged from 14 to 17 years. The subjects were divided into two equal groups (n-15) of fifteen subjects each. Experimental

Group I and Group II acted as control. Before the start of the training experiment, all the subjects were tests on selected physical fitness components and the readings were recorded as pre-test scores. After pre-test the experimental group participated in a varied specific training program, which was designed to last 60 minutes per session, with three sessions held on alternative days (Monday, Wednesday, and Friday) over a period of six weeks. Every two weeks of training, the intensity of the load was increased by 5%, ranging from 55% to 80% of the workload. The volume of physical fitness components was prescribed based on the number of sets and repetitions. On the other hand, the control group did not receive any specialized training and continued with their routine activities. Following the six weeks of training, all the subjects were re-tested for speed (50mts dash), Agility shuttle run (4x10) and the readings were recorded as post-test scores. The collected pre and post-test scores were analyzed using the paired 't' test.

STASTICAL TECHNIQUE

The collected pre and post test scores of experimental and control groups were analyzed with paired ‘t’ test and the results were presented in the form of tables and figures.

Criterion Measures

It is evaluated physical fitness components variables that were chosen as the criterion measures for this study for testing.

TABLE-1 CRITERION MEASURES

S.NO	PHYSICAL FITNESS COMPONENTS VARIABLES	TEST ITEMS	MEASURMENT
1	speed	50 mts dash	In seconds
2	Agility	ttle run 4X10	In seconds

RESULT

TABLE- 2 COMPUTATION OF 'T-RATIO BETWEEN PRE AND PRE TEST MEANS OF EXPERIMENTAL GROUP AND CONTROL GROUP ON SPEED (IN SECONDS)

Group	Test	Mean	Standard deviation	Mean Difference	Standard Error mean	t-ratio
Experimental group	Pre test	7.46	1.48	0.74	0.22	3.285*
	Post test	7.02	0.91			
Control group	Pre test	7.42	1.40	0.79	0.43	1.81
	Post test	7.50	1.36			

Significant at 0.05 level of confidence (2.14),

Table-1 shows that computed of t ratio between pre and post test mean on speed of adolescence handball players. The mean value of pre test and post test of experimental group and control group were (7.46,7.02) and (7.42,7.50) respectively, Since the obtained "t" ratio 3.285 was greater than the required table value 2.14. it was found to be statistically significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The result clearly indicated that the speed of experimental group significantly improved due to influence of varied specific training. Since the obtained "t" ratio 1.819 was lesser then the required table value 2.14, it was found to be statistically not significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The result clearly indicated that the control group had not been improved on speed.

FIGURE – 2 GRAPHICAL REPRESENTATION SHOWING THE PRE AND POST TEST MEAN VALUES OF EXPRIMET GROUP AND CONTROL GROUP ON SPEED (IN SECONDS)

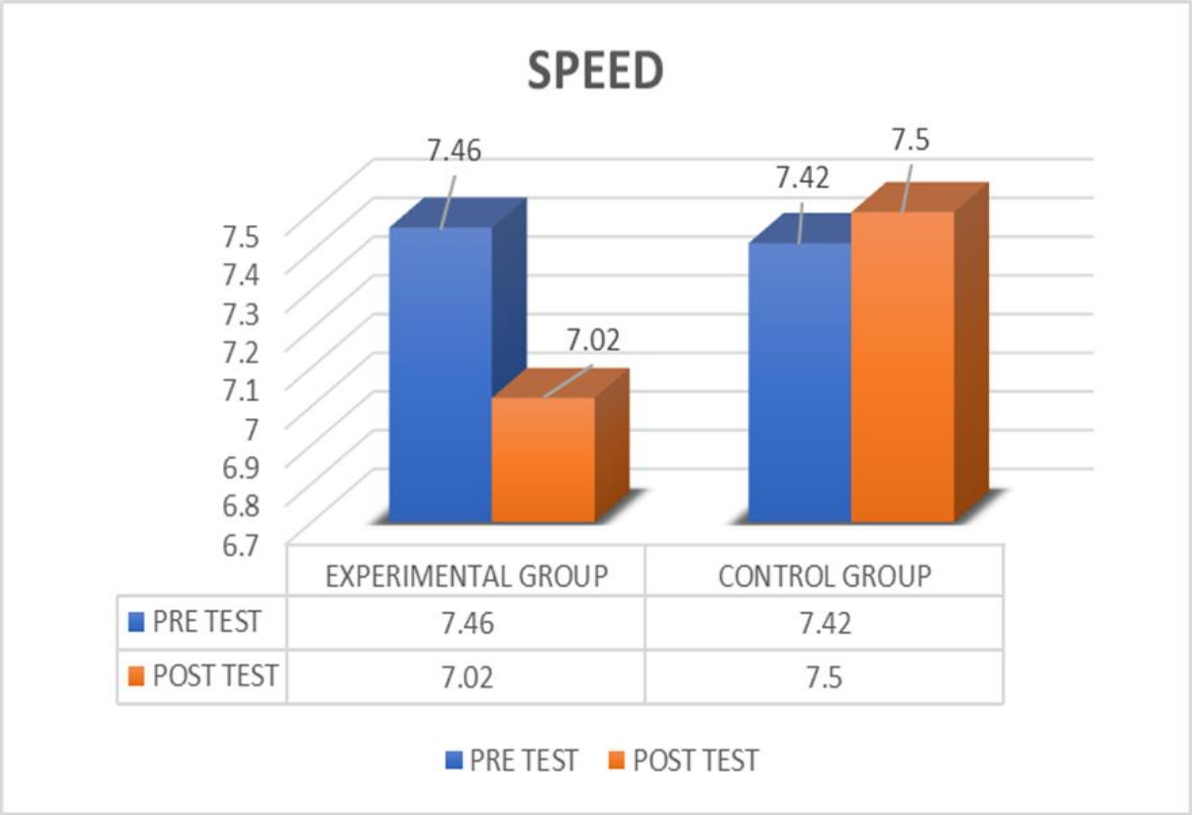


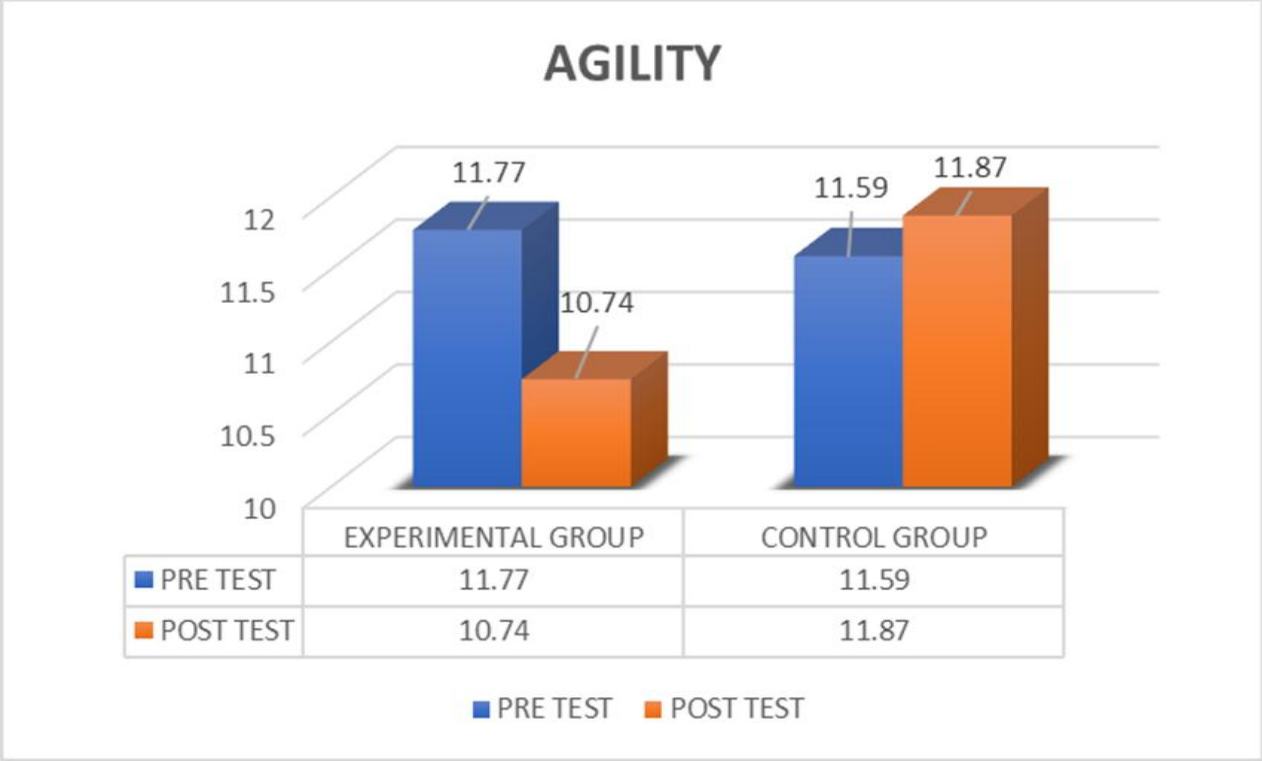
TABLE-3 COMPUTATION OF 'T-RATIO BETWEEN PRE AND POST TEST MEANS OF EXPERIMENTAL GROUP AND CONTROL GROUP ON AGILITY (IN SECONDS)

Group	Test	Mean	Standard deviation	Mean Deviation	Standard Error mean	t-ratio
Experimental group	Pre test	11.77	0.98	1.03	0.15	6.69*
	Post test	10.74	0.69			
Control group	Pre test	11.59	0.86	0.232	0.25	1.09
	Post test	11.87	1.22			

Significant at 0.05 level of confidence (2.145),

Table 4.2 shows that computed of t ratio between pre and post test mean on agility of adolescence handball players. The mean value of pre test and post test of experimental group and control group were (11.77,10.74) and (11.59,11.87) respectively, Since the obtained "t" ratio 6.69 was greater than the required table value2.14. it was found to be statistically significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The result clearly indicated that the agility of experimental group significantly improved due to influence of varied specific training. Since the obtained "t" ratio 1.09 was lesser then the required table value 2.14, it was found to be statistically not significant for the degree of freedom 1 and 14 at 0.05 level of confidence. The result clearly indicated that the control group had not been improved on agility

FIGURE -3-GRAPHICAL REPRESENTATION SHOWING THE PRE AND POST TEST MEAN VALUES OF EXPRIMET GROUP AND CONTROL GROUP AGILITY ON (IN SECONDS)



DISCUSSION ON FINDINGS

The results of the study indicated that the experimental group I namely experimental group had significantly influenced on the physical fitness components variables such as speed and agility The group II namely control training group had not shown significant improvement in any of the selected variables as they have not been subjected to any of the varied specific training Conditioning similar to that of experimental group. Thus, the effect of physical fitness components on the criteria variables was understood.

CONCLUSIONS

Based on the findings and within the limitations of the study, the following conclusions were drawn:

1. The Varied Specific Training on Physical Fitness Components Variables had significant improvement on adolescent male handball players.
2. The control group did not show any significant improvement over the on physical fitness components of adolescent male handball players.
3. Comparing the effects of Varied Specific Training on Physical Fitness Components and control group. It was concluded that the Physical Fitness Components produced significant improvement in training on speed and agility for adolescent male handball players compared to control group.

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