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EFFECT OF SPEED TRAINING ON SELECTED PHYSICAL VARIABLES AMONG HANDBALL PLAYERS

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Abstract: The purpose of this study was to determine the effect of speed training on selected physical variables among Handball players. For the study 30 healthy male handball players with age of 19-23 years were randomly allocated into a speed training. Their life style and living condition were not taken into consideration. The selected subject was divided into two groups within 15 subjects in each group namely one experimental group' i.e speed training (Group I) and one control (Group II). The experimental group undergoes selected speed training for 12 weeks, trained three days per week for duration of 60 minutes every day. The training was given in the evening hours between 4:30- 5:30 pm. The control group did not undergo any training program except their routine work. The pre test and post test on speed and agility was measured and the data was statistically analysed by using ANOVA to find out the significant difference among the two groups. The finding of the study revealed that there was a beneficial effect on speed and agility for experimental group when compared to the control. The training was more effective for speed training practice.

Keyword: Agility, Handball, Speed Training and Speed.

INTRODUCTION

Speed is one of the main fitness components, important for success in many sports. For some athletes such as Track and Field sprinters, sprint swimmers, cyclists and speed skaters, speed is the most important aspect of fitness. In many other sports, including team field sports, good speed is also very important as part of the overall fitness profile. To improve your running speed requires a training program that focuses on leg strength and power, with appropriate technique training to best utilize your strength and power development. In physical terms, the increase in speed generated by over-speed training methods has a lasting effect on muscles' ability to generate force, particularly during the foot strike and drive phase of sprinting. Put simply, muscles become more powerful and faster at contracting. From a neural perspective, advocates of over-speed training believe that the brain will literally 'learn' to fire faster and control more muscle (in particular fast- twitch muscle fibres) to achieve greater speeds. Handball is an indoor team sport, which mixes high-speed action, gymnastic agility, sleight of hand and tremendous power with spectacular shots on goal. Handball is a great sport for getting your body fit and healthy through fast-paced exercise. Improving agility, flexibility and the body's cardiovascular system, handball offers a fine workout. Handball is a fast-flowing game. The aim is to throw the ball into the opponent's goal as many times as possible within two 30-minute periods of play. The players work together, passing and dribbling the ball up the court in an attempt to score a goal. The fast pace of the game results in many shots being taken, number of goals been scored in game. The sport requires strength, speed and agility..

METHODOLOGY

SELECTION OF SUBJECTS

The purpose of this study, 30 healthy male handball

players was selected from Pondicherry region, puducherry, were randomly selected and their age ranged between 19-23 years.

INCLUSION AND EXCLUSION CRITERIA

The subjects for this study were oriented and the purpose of the study was explained. The method of performing the test on speed and agility was explained to the subjects before conducting the test. The research scholar explained and demonstrated the 50mts dash and shuttle run to the subjects. The recordings of the measurements were made known to the subjects with a view to familiarize about their performance. The subjects of the experimental groups received personalized attention and supervision of the trainer in relation to the speed training. The training was given three-day per week for sixty minutes in the evening hours between 4:30- 5:30 pm for twelve weeks. The subjects living condition and life style are not taken into consideration for this study.

TABLE-I
ANALYSIS OF VARIANCE FOR THE PRE AND POST ON SPEED AND AGILITY OF EXPERIMENTAL AND CONTROL GROUP

Test	SPEED						'f' ratio
	Experimental Group	Control Group	Source of variance	Sum of square	df	Mean square	
Pretest Mean	7.07	7.07	Between	0.0004	1	0.0004	0.004
SD(±)	0.04	0.02	Within	0.026	28	0.001	
Post test Mean	7.00	7.08	Between	0.054	1	0.054	19.46*
SD(±)	0.04	0.02	Within	0.077	28	0.003	

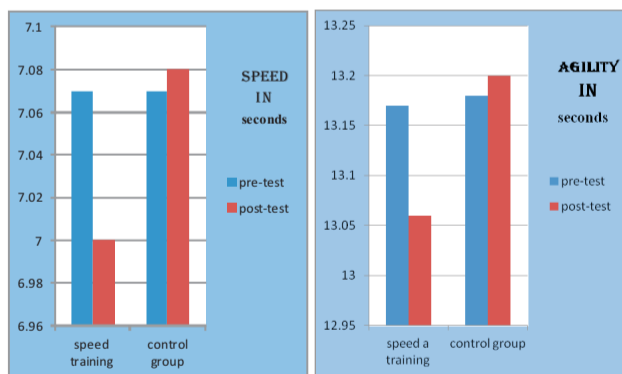
AGILITY							
Pretest Mean	13.17	13.18	Between	0.0004	1	0.0004	0.097
SD(±)	0.050	0.085	Within	0.138	28	0.005	
Post test Mean	13.06	13.20	Between	0.150	1	0.150	50.79*
SD(±)	0.047	0.060	Within	0.083	28	0.003	

*Significant at 0.05 level.
Required table value at 0.05 level of significance for 1 & 28 degrees of freedom = 4.20

Table-I shows that the pre test means on speed and agility of the experimental group and the control group for speed 7.07 and 7.07 respectively. The obtained 'F' ratio value 0.004 for the pre test mean is lesser than the required table value 4.20 for significance at 0.05 levels. For agility 13.17 and 13.18 respectively. The obtained 'F' ratio value 0.097 for the pre test mean is lesser than the required table value 4.20 for significance at 0.05 levels. Hence, it is not significant and it reveals that there is no significance difference between the experimental group and the control group on speed and agility before the commencement of experimental training. It is inferred that the random selections of the subjects for the two groups are successful.

The post test means on speed and agility of the experimental group and the control group for speed 7.00 and 7.08 respectively. The obtained 'F' ratio value 19.46 for the post test mean is greater than the required table value 4.20 for significance at 0.05 levels. For agility 13.06 and 13.20 respectively. The obtained 'F' ratio value 50.79 for the post test mean is greater than the required table value 4.20 for significance at 0.05 level of significance. It reveals that there is statistically significant difference among the experimental group and the control group on speed and agility after the experimental training.

GRAPHICAL REPRESENTATION OF SPEED AND AGILITY AMONG SPEED TRAINING AND CONTROL GROUP



DISCUSSION

The study was framed to analyze and compare the effect of speed training on speed and agility among handball players. The result of the study is in consonance with the findings of the following studies by Mujika (2009), Jovanovic, et al., (2011) and Zoran Milanovic, et al., (2013).

CONCLUSION:

While concluding, within the limits of the present study, selected speed and training contribute positively towards the improvement on speed and agility of handball players.

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