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EFFECT OF AMBIDEXTERITY CONVENTIONAL TRAINING AND COMBINED TRAINING ONSELECTED PHYSICAL FITNESS VARIABLES

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ABSTRACT

The purpose of the study was to find out the effect of ambidexterity training, conventional trainingand combined training on selected physical fitness variables. Sixty male students aged between 14 and 17 years were selected from different schools in Chennai were for the study. They were divided into four equal groups, each group consisting of fifteen subjects in whom Group I underwent ambidexterity training, group II underwent conventional training, group III underwent combination training, three days per week for twelve weeks and group IV acted as control, which did not participate in any training. The subjects were tested on selected criterion variables such as leg strength, back strength and cardio-respiratory endurance at prior to and immediately after the training period. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, between the experimental groups and control group on selected criterion variables separately. Since there were four groups involved in the present study, the SchefféS test was used as post-hoc test. The selected criterion variables such as leg strength, back strengthand cardio-respiratory were improved significantly in all the training groups when compared with the control group and the leg and back strength were improved significantly for combined training group and ambidexterity training group, and in cardio-respiratory endurance , the conventional training group and combined training groups were significantly improved.

KEYWORDS:*Ambidexterity training, conventional training, physical fitness.*

INTRODUCTION:

Human body is a gift by nature beings are designed for the physical activity, primitive humanshad to be able to run, climb, jump and throw to provide for their needs and to escape constantthreats to their lives. Throughout the history of mankind physical fitness has been consideredan essential element of everyday life. The ancient people were mainly dependent upon theirindividual strength, vigour, and vitality for physical survival. This involved the mastery ofsome basic skills like strength, speed, endurance, and agility for balance, running, jumping,climbing and other skills employed in hunting for food, fighting animals and other groups ofhumans and to escape from constant threats to their lives. Fitness is all things to all people, aprecious commodity which enables us to live our lives to the full yet is really cherished onlywhen it begins to fade away.. To a coach it issomething which comes with training, to a physician a functional state of the body defines intechnical terms. It is strength, flexibility, agility, power, speed and muscular and cardiovascular endurance, according to Percival (1999).

Physical training is one of the most important ingredients in training to achieve high

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performance. The objectives of physical training are to increase the athlete's physiological potential and to develop bio motor abilities to the highest standards (Tudor O. Bompa, 1999). Sports training is a process of athletic improvement, which is conducted on the basis of scientific principles and which, through systematic development of mental and physical efficiency, capacity and motivation, enables the athletes to produce outstanding and record breaking athletic performances (Dietrich Harre, 1982).While planning the dynamics of training, consider these aspects, referred to as the variables of training according to the functional and psychological characteristics of a competition. Throughout the training phases preceding a competition, define which component to emphasize and achieve the planned performance objective (Vladimir M.Zatsiorsky, 1995).

METHODS:

In this study it was aimed to find out the effect of ambidexterity training and conventional trainingand combined training on leg strength, back strength and cardio-respiratory Endurance. To achieve the purpose sixty male students from different schools in Chennai, Tamil Nadu were selected as subjects at random from the total population of 275 students. They were divided into four equal groups of fifteen each and further divided as three experimental groups and one control group, in which the group I (n=15) underwent ambidexterity training, group II (n = 15) underwent conventional training and group III (n = 15) underwent the combination training for three days per week for twelve weeks, and group IV (n=15) acted as control which did not participate in any special training apart from the regular physical education programme of the curriculum., the researchers consulted with the experts and then selected the following variables as criterion variables: 1. Leg strength, 2. Back strength and 3. Cardio-respiratory endurance.

ANALYSIS OF THE DATA AND RESULTS

Table – I

Analysis of Covariance and 'F' ratio for Leg Strength, Back Strength and Cardio-respiratory Conventional of Ambidexterity Training Group, Conventional Training Group and Combined Training Group and Control Group.

Variable Name	Group Name	Ambidexterity Training Group	Conventional Training Group	Combined Training Group	Control Group	'F' Ratio
Leg Strength	Pre-test Mean	74.60	75.20	73.13	74.33	1.27
	S.D±	± 2.324	±3.256	±3.114	±3.109	
	Post-test Mean	78.60	76.67	74.80	74.53	**6.05***
	S.D. ±	±2.694	±3.155	± 2.651	±3.335	
	Adj. Post-test Mean	78.333	75.833	75.917	74.518	**38.63 ***
Back Strength	Pre-test Mean	65.13	64.47	64.13	64.87	0.65
	S.D. ±	±1.552	±1.807	±2.560	±2.356	
	Post-test Mean	71.93	66.13	66.00	64.87	**28.74 ***
	S.D. ±	±2.434	±2.10	±2.591	±2.031	
	Adj. Post-test Mean	71.506	66.295	66.456	64.675	**70.12 ***
Cardio-respiratory endurance	Pre-test Mean	1596.67	1598.67	1626.00	1626.00	1.16
	S.D. ±	±45.93	±68.02	±40.32	±73.659	
	Post-test Mean	1618.67	1742.67	1696.00	1624.67	**18.40 ***
	S.D. ±	±41.725	±59.217	±35.817	±71.00	
	Adj. Post-test Mean	1630.76	1753.17	1684.70	1613.37	**82.60 ***

* Significant at .05 level of confidence. (The table value required for significance at .05 level of confidence with df 3 and 56 and 3 and 55were 2.77 and 2.78 respectively).

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Table – I shows the results of the study that the leg and back strength and cardio respiratory endurance have improved significantly after the respective training programme. In order to find out, which of the paired mean got significant improvement, Scheffe's post hoc test was applied.

Table - II

Scheffe S Test for the Difference Between the Adjusted Post-Test Means of criterion variables

Ambidexterity Training Group	Conventional Training Group	Combined Training Group	Control Group	Mean Difference	Confidence Interval at 0.05 level
Adjusted Post-test Mean for Leg Strength					
78.333	75.833			2.5*	1.0438
78.333		75.917		2.416*	1.0438
78.333			74.518	3.815*	1.0438
	75.833	75.917		0.084	1.0438
	75.833		74.518	1.315*	1.0438
		75.917	74.518	1.399*	1.0438
Adjusted Post-test Mean for Back Strength					
71.506	66.295			5.211*	1.4364
71.506		66.456		5.05*	1.4364
71.506			64.675	6.831*	1.4364
	66.295	66.456		0.161	1.4364
	66.295		64.675	1.62*	1.4364
		66.456	64.675	1.781*	1.4364
Adjusted Post-test Mean for Cardio-respiratory endurance					
1630.76	1753.17			122.41*	28.1677
1630.76		1684.703		53.943*	28.1677
1630.76			1613.37	17.39	28.1677
	1753.17	1684.703		68.467*	28.1677
	1753.17		1613.37	139.8*	28.1677
		1684.703	1613.37	71.33*	28.1677

* Significant at 0.05 level of confidence.

DISCUSSION ON FINDINGS

Table – II reveals that the Schefs test for the difference between adjusted post-test mean of ambidexterity training group and conventional training groups (2.5), ambidexterity training group and combined training group (2.416), ambidexterity training group and control group (3.815), conventional training group and control group (1.315) and combined training group and control group (1.399, which were significant at 0.05 level of confidence. But there was no significant difference between conventional training group and combined training group (0.084) on leg strength after the training programme.

Table – II reveals that the Scheffes test for the difference between adjusted post-test mean difference in back strength between ambidexterity training group and conventional group (5.211), ambidexterity training group and combined training group (6.831), ambidexterity training group and control group (1.62) combined training group and control group (1.781) were significant at .05 level of confidence. But there was no significant difference between conventional training group and combined training groups (0.161) on back strength after the training programme.

Table – II reveals that the Scheffes test for the difference between adjusted post-test mean difference in cardio-respiratory conventional between ambidexterity training group and conventional group (122.41), ambidexterity training group and combined training group (53.943), conventional training group and combined training group (68.467), conventional training group and control group (139.8) combined training group and control group (71.33) were significant at .05 level of confidence.

But there was no significant difference between ambidexterity training group and control group (17.39) on

cardio-respiratory conventional after the training programme.

The most important aspect to realize about any sport, especially cricket, is to identify position and role specific fitness components that need to be addressed in your Strength and Conditioning protocols. When these components have been identified and scientifically structured into well-designed training sessions, any cricketer regardless of their level of competition will benefit immensely.Leg strength, back strength and cardio-respiratory endurance which fitness components are absolutely vital to any cricketer.

When these aspects have been focused on this research, it has been proven that ambidexterity, conventional and combined trainings are takes vital role to improve all the parameters required for the good performance of the cricketers. Hence, it may be suggested that coaches may concentrate on these parameters and training while formulating the training programme for the cricketers.

CONCLUSIONS

1.It was concluded from the results of the study that the leg and back strength and cardio respiratory endurance have improved significantly after the respective training programme.
2.When compared with the control group, all the training group has significantly differed in both the criterion variables, except in cardio-respiratory endurance, the ambidexterity training has not differed from the control group significantly.
3.It was also concluded that the ambidexterity training group has improved their leg and back strength better than the conventional training group and combined training group significantly. But the conventional training group and combined training group have also improved their performance significantly.
4.There was no significant improvement in cardio-respiratory endurance for the ambidexterity training group when compared with the control group. But all the remaining training groups have improved on cardio-respiratory endurance significantly.

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