



Effect of Kalaripayatu Training on Selected Bio Motor Variables of Handball Players

KEYWORDS

Kalaripayatu Training, Speed and Cardio Respiratory Endurance

M.PRABU

ASSISTANT PROFESSOR, MARUTHI COLLEGE OF PHYSICAL EDUCATION
COIMBATORE-641020

ABSTRACT To achieve the purpose of the present study (N=30) college men players were randomly selected from Sri Ramakrishna Mission Vidyalaya maruthi college of physical education and Vivekananda University faculty of general and adapted physical education and yoga, Coimbatore, Tamil Nadu. Their age ranged from 18 to 25 years. They were assigned to two groups namely experimental group-I with (n=15) boys who were given kalaripayatu training for 12 weeks 5 days a week and other group-II with (n=15) acted as control group. The experimental group was tested on bio variables namely speed and cardio respiratory endurance. The selected criterion variable was speed measured with 50 m dash and cardio respiratory endurance was measured with 12 min run/walk. The prior and after test data were collected and treated with Dependent 't' test. The level of confidence was fixed at 0.05. The study results showed that the experimental group significantly increased cardio respiratory endurance and speed due to kalaripayatu training programme. The control group did not alter on selected bio motor variables.

INTRODUCTION

Kalaripayattu is perhaps the most ancient martial art in the world. Religions have incorporated kalaripayattu into their realm. The origin of kalaripayattu is still in the midst of obscurity. Traditional kalari masters attribute mythological stories and legends to the origin of the art. Legend traces the 3000-year-old art form to sage parasurama- the master of all martial art forms and credited to be the re-claimer of kerala from the Arabian Sea.

At the turn of the 6th century a.d., martial arts spread from southern india to china through daruma bodhidharma - an indian buddhist monk and kalaripayattu master. From china, martial arts have spread to korea & japan. Kalaripayattu is derived from the words kalari - which means "place, threshing floor, or battlefield", and payattu - which means to "exercise in arms or practice". Martial arts have been in existence on the indian sub-continent for thousands of years. Long ago, animal fighting styles were imitated by pre-historic man, as a system for survival. The first weapon used was the stick which was an extension of the arm. Various weapons were later invented during the stone and iron ages. The vedas mention about martial arts. Kalaripayattu is one such martial art, crafted in ancient south india and drawing inspiration from the raw power, majestic strength and instinctive fighting techniques of animals like lion, tiger, elephant, wild boar and crocodile. It is significant that some kalaripayattu masters trace their lineages of practice to "dhanur veda" and claim that the texts in which their martial techniques are recorded derive from

dhanur vedic texts. Although the dhanur veda means the "science of archery," it encompasses all the traditional fighting arts. The explicit concern in dhanur veda texts is not with battlefield strategies, but with training in martial techniques.

METHODOLOGY

To achieve the purpose of the present study (N=30) college men players were randomly selected from Sri Ramakrishna Mission Vidyalaya maruthi college of physical education and Vivekananda University faculty of general and adapted physical education and yoga, Coimbatore, Tamil Nadu. Their age ranged from 18 to 25 years. They were assigned to two groups namely experimental group-I with (n=15) boys who were given kalaripayatu training for 12 weeks 5 days a week and other group-II with (n=15) acted as control group. The experimental group was tested on bio variables namely speed and cardio respiratory endurance. The selected criterion variable was speed measured with 50 m dash and cardio respiratory endurance was measured with 12 min run/walk. The prior and after test data were collected and treated with Dependent 't' test. The level of confidence was fixed at 0.05.

TRAINING PROGRAM

1.Gaja vadivu, 2.Simha vadivu, 3.Aswa vadivu, 4.Malasi vadivu, 5.Marjara vadivu, 6.Varaka vadivu, 7.Nar kall, 8.Kon kall, 9.Veethu kall, 10.Thiruchu kall, 11.Eruthi kall, 12.Soochi kall, 13.Malarnu eruthi kall, 14.Malarnu soochi eruthi kall

Week	1	2	3	4	5	6	7	8	9	10	11	12
Exercise	1,2,3	1,2,3,4	1,2,3,4,5	1,2,3,4,5,6	1,2,3,4,5,6,7	1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8,9	1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10,11	1 to 12	1 To 13	1 To 14
Repetition	4	4	4	5	5	5	6	6	6	8	8	8

Duration : 60 minutes warm up – 10 min warm down – 5 min Rest between set – 30 seconds

RESULTS

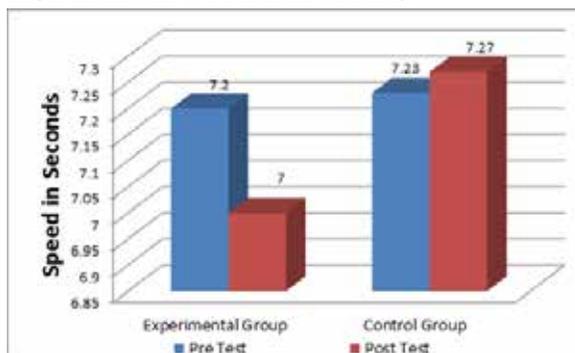
**Table-I
COMPUTATION WITH 't' TEST ON SPEED OF EXPERIMENTAL AND CONTROL GROUP OF COLLEGE LEVEL MEN HANDBALL PLAYERS**

Variable	Group	Test	Mean	S.D	DM	't'
SPEED	Group	Pre Test	7.20	0.21	0.070	2.84*
		Post Test	7.00	0.34		
	Control Group	Pre Test	7.23	0.27	0.026	
		Post Test	7.27	0.30		

* Significant Level of significant was fixed at 0.05 with df 14 Table value 2.14

Table-1 Indicates experimental and control group of speed mean and standard deviation of college level men handball players. The experimental group pre and post test mean values are 7.20 and 7.00 and standard deviation values are 0.21 and 0.34 and obtained 't' value is 2.84 which is greater than table value 2.14 with df 14. And control group mean values are 7.23 and 7.27 and standard deviation 0.27 and 0.30. The results of the study 't' value 0.35 which is lesser than table value 2.14. The finding of the study indicates that experimental group significant improvement on speed due to kalaripayatu training of college level men handball players.

**FIGURE-1
MEAN VALUES OF EXPERIMENTAL AND CONTROL GROUPS OF PRE AND POST TEST ON SPEED OF COLLEGE LEVEL MEN HANDBALL PLAYERS.**



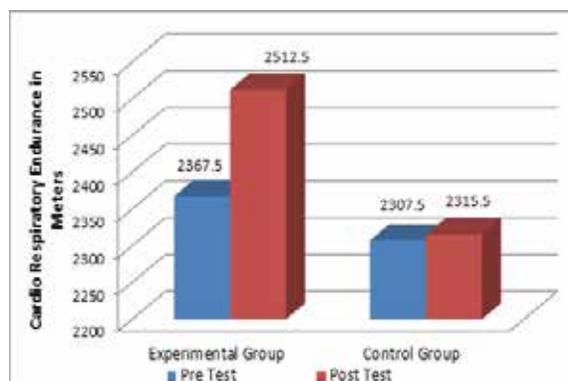
**Table-II
COMPUTATION WITH 't' TEST ON CARDIOVASCULAR ENDURANCE OF EXPERIMENTAL AND CONTROL GROUP OF COLLEGE LEVEL MEN HANDBALL PLAYERS**

Variable	Group	Test	Mean	S.D	DM	't'
SPEED	Group	Pre Test	2367.50	60.48	13.52	10.72*
		Post Test	2512.50			
	Control Group	Pre Test	2307.50	56.83	12.70	
		Post Test	2315.50			

* Level of significant was fixed at 0.05 with df 14 Table value 2.14

Table-4 Indicates experimental and control group of speed mean and standard deviation of college level men handball players. The experimental group pre and post test mean values are 2367.50 and 2512.50 and standard deviation values are 60.48 and obtained 't' value is 10.72 which is greater than table value 2.14 with df 14. And control group mean values are 2307.50 and 2315.50 and standard deviation 56.83 . The results of the study 't' value 0.59 which is lesser than table value 2.14. The finding of the study indicates that experimental group significant improvement on cardiovascular endurance due to kalaripayattu training of college level men handball players.

**FIGURE-2
MEAN VALUES OF EXPERIMENTAL AND CONTROL GROUPS OF PRE AND POST TEST ON CARDIO RESPIRATORY ENDURANCE OF COLLEGE LEVEL MEN HANDBALL PLAYERS.**



DISCUSSION ON FINDINGS

The results statistically proved that kalaripayatu training group are better method improving the bio motor variables are speed and cardio respiratory endurance of handball players. The result is in agreement with other studies. These training protocols resulted in similar oxygen uptake and heart rate responses compared to match simulations (Franchini E et.al., 2013). Youth participating in soft martial arts had good upper extremities that might not result from regular exercise alone (Huang C.C, 2008 & Cynar et al., 2015). Traditional with kalari training improves cardio respiratory endurance (Donovaa Oliver 2006) & (Neto 2012).

CONCLUSIONS

1. Kalaripayatu training group had shown significant improvement of selected speed and cardio respiratory endurance of handball players.
2. The control group did not show the significant improvement of selected criterion variables

REFERENCES

1. Donova Oliver (2006), " An Investigation of leg and trunk strength and reaction times of hard style martial arts practioners", Journal of Sports Science and Medicine, pp. 2, 42
2. Frachini (2013), "Physiological and performance responses to intermittent", The Journal of Strength and Conditioning Research", Vol 27 (4), pp.1147-55.
3. Huang CC (2008), " Upper Extremities Flexibility Comparison of Collegiate Soft Martial art Practioners with other Athletes", International Journal of Sports Medicine, Vol 29(3), pp.232-241.
4. Neto OP (2012), " The effect of hand dominance on martial arts strikes", Human .mov.science, Vol4, pp.824-833.
5. Cynar Ski Wojciech J , Sieber Lothar (2015), "Martial arts alternative medicine channels" Journal of transmission to Europe15(3), pp.8-21.