



EFFECT OF KALARI TRAINING ON THE SELECTED PHYSIOLOGICAL VARIABLES OF KABADDI PLAYERS

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Abstract

The purpose of the study was to examine the effect of Kalari training on the selected Physiological variables of Kabaddi players. For the present study, 30 male Kabaddi players from Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education, Coimbatore, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre-test and post-test randomized group design which consists of control group and experimental group used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent Kalari training and Group 'B' underwent no training. The data were collected before and after twelve weeks of the training. The data were analysed by applying Analysis of Co-Variance (ANCOVA) technique to find out the effect of Kalari training programme. The level of significance was set at 0.05. The findings of the present study strongly indicate that Kalari training of twelve weeks has significant effect on Physiological variables i.e., vital capacity and forced vital capacity of Kabaddi players. Hence the hypothesis earlier set that Kalari training programme would have been significant effect on selected Physiological variables in light of the same the hypothesis is accepted. The result reveals that there is a significant effect of Kalari training was found on vital capacity and forced vital capacity of Kabaddi players.

Keywords: Kalari Training, Kabaddi players and Physiological variables.

INTRODUCTION

The origin and evolution of every traditional art form of India can be traced back to the Vedic period and beyond. The legends say that yoga, classical dance forms like Bharatanatyam and martial traditions like Kalaripayattu evolved from Lord Shiva. The physical exercises practised by Lord Shiva and other divine beings, were put together to form the base of present day yoga, by the great sage Patanjali. Kalaripayattu is a Dravidian martial art from Kerala, India. Possibly one of the oldest fighting systems in existence and is being practised in Kerala and contiguous parts of Tamil Nadu and Karnataka as well as northeastern Sri Lanka and among the Malayalee community of Malaysia. (Sreenath, S. (2017).

Kabaddi is primarily an Indian game, not much is known about the origin of this game. There is, however, a concrete evidence, that the game is 4,000 years old. It is a team sport, which requires both skill and power. It was originally meant to develop self-defense, in addition to responses to attack and reflexes of counter attack by individuals and by groups or teams. It is a rather simple and inexpensive game, and neither requires a massive playing area, nor any expensive equipment. This explains the popularity of the game in rural India. Kabaddi is played all over Asia with minor variations. Kabaddi is known by various names viz. *Chedugudu* or *Hu-Tu-Tu* in the southern parts of India, *Hadudu* (Men) and *Chu - Kit-Kit* (women) in the eastern India, and

Kabaddi in northern India. The sport is also popular in Nepal, Bangladesh, Sri Lanka, Japan and Pakistan.

Kabaddi is a combative team game, played with absolutely no equipment, in a rectangular court, either out-doors or indoors with seven players on the ground on each side. Each side takes alternate chances at offence and defense. The basic idea of the game is to score points by raiding into the opponents court and touching as many defense players as possible without getting caught on a single breath. During play, the players on the defensive side are called "Antis" while the player of the offense is called the "Raider". Kabaddi is perhaps the only combative sport in which attack is an individual attempt while defense is a group effort. The attack in Kabaddi is known as a 'Raid'. The antis touched by the raider during the attack are declared 'out' if they do not succeed in catching the raider before he returns to home court. These players can resume play only when their side scores points against the opposite side during their raiding turn or if the remaining players succeed in catching the opponent's raider. The purpose of the study was to investigate the effect of twelve weeks of Kalari training programme on selected Physiological variables of Kabaddi players.

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PROCEDURE AND METHODOLOGY

For the present study 30 male Kabaddi players from Sri Ramakrishna Mission Vidyalaya Maruthi College of Physical Education, Coimbatore, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. For the present study pre test – post test randomized group design which consists of control group and experimental group was used. The subjects

were randomly assigned to two equal groups of fifteen each and named as Group ‘A’ and Group ‘B’. Group ‘A’ underwent Kalari training and Group ‘B’ underwent no training. The data were collected before and after twelve weeks of training. The data were analyzed by applying Analysis of Co-Variance (ANCOVA) technique to find out the effect of Kalari training programme on the selected Physiological variables of Kabaddi players.

TABLE – I
KALARI TRAINING PROGRAMME

S. No	Exercises	Intensity	Duration of Exercise	Set	Rest between the Set	Rest between the Exercise
1	Nerkaal	65%	60 seconds	4	45 seconds	2 Minutes
2	Konekaal	65%	60 seconds	4	45 seconds	2 Minutes
3	Akamkaal	65%	60 seconds	4	45 seconds	2 Minutes
4	Puramkaal	65%	60 seconds	4	45 seconds	2 Minutes
5	Gajavadivu	65%	60 seconds	4	45 seconds	2 Minutes
6	Simhavadvu	65%	60 seconds	4	45 seconds	2 Minutes
7	Aswavadvu	65%	60 seconds	4	45 seconds	2 Minutes
8	Maltisavadvu	65%	60 seconds	4	45 seconds	2 Minutes

RESULTS AND DISCUSSIONS ON FINDINGS

The primary objective of the paired ‘t’ ratio was

to describe the mean differences between the pre-test and post-test of Kabaddi players.

TABLE - II
SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES
ON SELECTED VARIABLES OF KABADDI PLAYERS

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	‘t’ Ratio
Experimental Group							
1	Vital Capacity	2.65	3.25	0.60	0.47	0.12	10.78*
2	Forced Vital Capacity	3.42	4.72	1.30	2.64	0.68	4.98*
Control Group							
1	Vital Capacity	2.60	2.61	0.01	4.22	1.08	0.61
2	Forced Vital Capacity	3.38	3.42	0.04	2.12	0.54	1.21

The table - I indicates that the obtained ‘t’ ratios of experimental group were 10.78 and 4.98 for vital capacity and forced vital capacity respectively were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant. The obtained ‘t’ ratios of control group were 0.61 and 1.21 for vital capacity and forced vital capacity respectively were found to be

lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be insignificant. The findings pertaining to analysis of co-variance between experimental group and control group on selected Physiological variables of Kabaddi players for pre and post test respectively have been presented in table No.III to IV.

TABLE – III
COMPUTATION OF ANALYSIS OF COVARIANCE OF MEANS OF KALARI TRAINING, AND CONTROL GROUPS ON VITAL CAPACITY

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	2.65	2.60	BG	0.02	1	0.02	2.47
			WG	0.22	28	0.008	
Post Test Mean	3.25	2.61	BG	3.05	1	3.05	814.44*
			WG	0.10	28	0.004	
Adjusted Post Mean	3.24	2.61	BG	2.75	1	2.75	731.34*
			WG	0.10	27	0.004	

** Significant at 0.05 level.

df: 1/27= 4.21

Table - III reveals that the obtained ‘F’ value of 731.34 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicated that

there was a significant difference in adjusted means of vital capacity of Kabaddi players between experimental group and control group. The graphical representation of data has been presented in figure No.1.

FIGURE: 1
COMPARISONS OF THE MEAN PRE-TEST, POST-TEST MEANS AND ADJUSTED POST-TEST FOR CONTROL GROUP AND EXPERIMENTAL GROUP IN RELATION TO VITAL CAPACITY

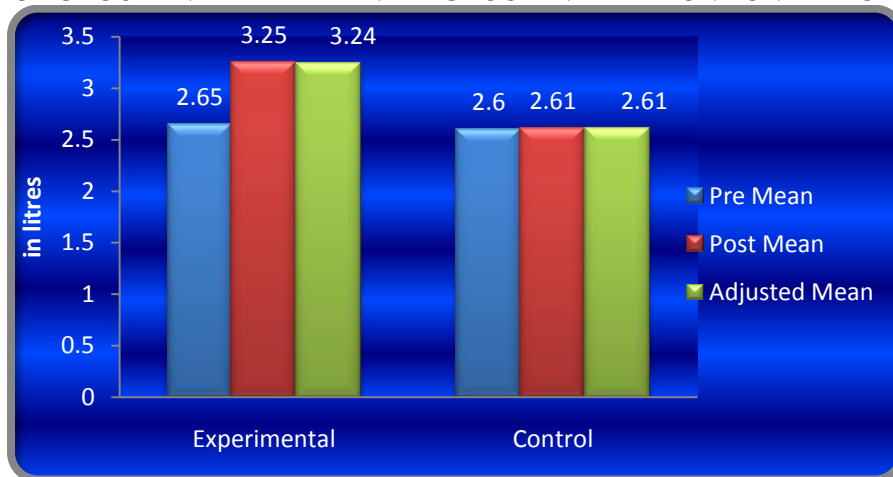


TABLE – IV
COMPUTATION OF ANALYSIS OF COVARIANCE OF MEANS OF KALARI TRAINING, AND CONTROL GROUPS ON FORCED VITAL CAPACITY

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	3.42	3.38	BG	0.01	1	0.01	2.96
			WG	0.11	28	0.004	
Post Test Mean	4.72	3.42	BG	12.71	1	12.71	1281.16*
			WG	0.27	28	0.01	
Adjusted Post Mean	4.72	3.42	BG	11.41	1	11.41	1115.67*
			WG	0.27	27	0.01	

** Significant at 0.05 level.

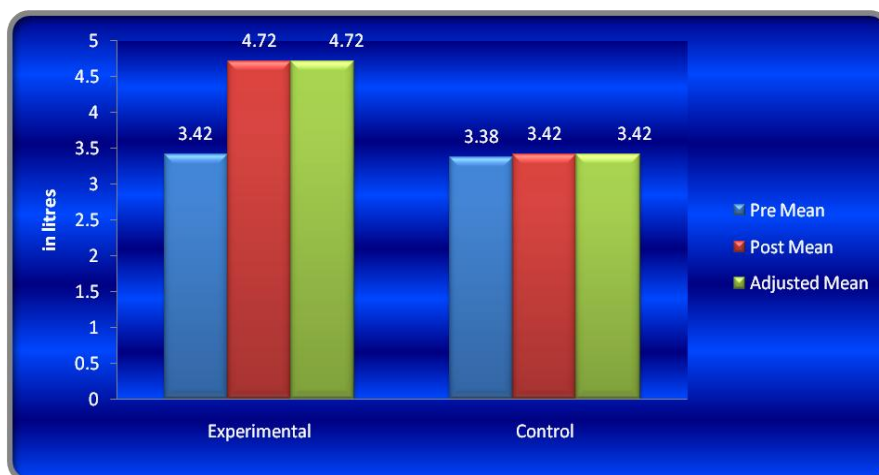
d/f: 1/27= 4.21

Table - IV reveals that the obtained 'F' value of 1115.67 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicates that

there was a significant difference in adjusted means of forced vital capacity of Kabaddi players between experimental group and control group. The graphical representation of data has been presented in figure No.2.

FIGURE: 2

COMPARISONS OF THE MEAN OF PRE-TEST, POST-TEST AND ADJUSTED POST-TEST FOR CONTROL GROUP AND EXPERIMENTAL GROUP IN RELATION TO FORCED VITAL CAPACITY



DISCUSSION AND CONCLUSIONS

In case of Physiological variables namely vital capacity and forced vital capacity the results between pre and post (12 weeks) test has been found significantly higher in experimental group in comparison to control group. The findings of the present study strongly indicate that Kalari training of twelve weeks has made significant effect on selected Physiological variables namely vital capacity and forced vital capacity of Kabaddi players. Hence, the hypothesis proposed has proved earlier that Kalari training programme would make significant effect on selected Physiological variables and therefore the hypothesis was accepted. On the basis of findings and within the limitations of the study the following conclusions are drawn: Significant effect of Kalari training has been identified on vital capacity and forced vital capacity.

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