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PHYSICAL EDUCATION

INFLUENCE OF YOGIC AND MALLAKHAMB PRACTICESON SELECTED PHYSICAL AND PERFORMANCE VARIABLES AMONG KHO- KHO PLAYERS

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Abstract*:*

The purpose of the study was to find out the influence of yogic and mallakhamb practices on selected physical variables namely cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and kabaddi playing ability among male kho-kho players. To achieve the purpose of the study thirty six male kho-kho players were randomly selected from in and around Sivagangai district in the state of Tamil Nadu, India. The age of subjects were ranged in between 18 to 23 years. The subjects had past experience of at least three years in kabaddi and only who those represented their respective college teams were taken as subjects. A series of physical variables was carried out on each participant. These included cardiovascular endurance assessed by cooper's 12 minutes run /walk, explosive power assessed by standing broad jump, flexibility assessed by sit and reach, muscular endurance assessed by sit- ups, balance assessed by stork balance test, performance variable assessed by using subjective rating. The subjects were randomly assigned into three groups of 12 each, such as experimental and control groups. Group-I underwent yoga practice, Group-II underwent mallakhamb practice for 5 days a week, one session (morning) per day and for 8 weeks, each session lasted 90 minutes. The control group maintained their daily routine activities and no special training was given. The subjects of the three groups were tested on selected variables prior and immediately after the training period. The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significance difference, if any between the groups. In case 'F' values found to be the significant the Scheffe's test was used as post hoc test. The 0.05 level of confidence was fixed to test the level of significance difference, if any between groups. The results of the study showed that there was significant level differences exist among yoga practice group, mallakhamb practice group and control group. When experimental groups were compared mallakhamb practice group showed significant improvement on physical and performance variables.

Keywords. Yoga,Mallakhamb, Explosive Power, Kho-Kho Playing Ability.

INTRODUCTION

We *could all use a little coaching. When you're playing the game, it's hard to think of everything."*

Now a days, more and more individuals particularly boys and girls are affected by sports activities and increasing the number that are representing in the sports area. As preventive and curative health measures, it has become more successful throughout the world and, millions of teenagers should have chance of enjoying sports. Sport is the way which we use our physical capacities to play. Sports is an important in other ways, when one's body works better his mind works better, his brain and his body are interrelated. Sports allows you to blow of tension, to forget your problems for a while and to go out and have a good time no matter what other pressures one may be under in his life. Kho-Kho is a chase and tag game where a chaser chases the runner to dismiss him/her from the game. The game is called Kho-Kho because it is obligatory on the part of the active chaser to utter 'kho' behind a seated chaser to hand over chase to the seated chaser for the progress of the game, failure in its, is a foul. **(Kendre 1995).**

The Mallakhamb is an art. Mallakhamb is one of the most ancient art in the field of physical culture will power or strength with in associated with perfect physical fitness makes a man more inspired in thriving for his earthly mission, and it makes the good health. It is a scientific and systematic methodology in acquiring a sound body and mind. This universal truth of healthy body and mind was thoroughly understand and accepted by our ancestor's right from the evaluation of the human race and they were practicing. One of the main reasons for attaching all those qualities and virtues can be attributed to the magic Mallakhamb culture, the in separable one ness of monkey **(Deshpande, 1986)**.

The word Mallakhamb is comprised of Mallakhamb – MallarKhambam – Malla – Mallar denotes – man of strength (power) – veeran – Gymnast. Khamb which is denotes in wooden pole. Therefore translated as a gymnast pole.

Mallakhamb as the name suggests is a pole used by wrestler for practicing their skills in thegame KUSTI. But now a days the trend has changed and it has got a special identity. Mallakhamb needs concentration. speed and flexibility. It is the only game which played against gravity.**(Mahesh Atale. R, 2003).**

Methodology

To achieve the purpose of the study thirty six male kho-kho players have been randomly selected from in and around sivagankai district in the state of Tamil Nadu, India. The age of subjects were ranged in between from 18 to 23 years. The subjects had past experience of at least three years in kho-kho and only who those represented their respective college teams were taken as subjects. A series of physical variables was carried out on each participant. These included cardiovascular endurance assessed by cooper's 12 minutes run /walk, explosive power assessed by standing broad jump, flexibility assessed by sit and reach, muscular endurance assessed by sit- ups, balance assessed by stork balance test, performance variable assessed by using subjective rating. The subjects were randomly assigned into three groups of 12 each, such as experimental and control groups. group-I underwent yoga practice, group-II underwent mallakhamb practice for 5 days a week, one sessions (morning) per day and for 8 weeks, each session lasted 90 minutes. The control group maintained their daily routine activities and no special training was given. The subjects of the three groups were tested on selected variables prior and immediately after the training period. The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significance difference, if any between the groups. In case 'F' values found to be the significant the Scheffe's test was used as post hoc test. The 0.05 level of confidence was fixed to test the level of significance difference, if any between groups.

TABLE – I
DESCRIPTIVE ANALYSIS OF SELECTED PHYSICAL AND PERFORMANCE VARIABLES AMONG CONTROL AND EXPERIMENTAL GROUPS

S.No	Variables	Group	Pre-Test Mean	SD (±)	Post –Test Mean	SD (±)	Adjusted Mean
1	Cardiovascular Endurance	YG	2228.83	22.03	2403.54	26.67	2406.29
		MG	2244.17	30.42	2398.81	28.54	2396.73
		CG	2239.71	31.73	2324.36	74.95	2323.69
2	Explosive Power	YG	176.46	0.88	185.80	1.41	185.81
		MG	176.62	0.86	187.83	0.89	187.80
		CG	176.42	0.87	184.16	0.57	184.18
3	Flexibility	YG	19.28	0.22	21.53	0.26	21.58
		MG	19.44	0.30	22.35	0.59	22.32
		CG	19.39	0.31	20.79	0.72	20.77
4	Muscular Endurance	YG	32.39	0.29	34.63	0.91	34.63
		MG	32.52	0.26	35.65	0.38	35.71
		CG	32.27	0.31	33.25	0.62	33.19
5	Balance	YG	57.86	0.66	82.45	1.54	82.52
		MG	58.32	0.91	85.33	0.65	85.28
		CG	58.19	0.95	80.00	2.17	79.98
6	Performance	YG	6.62	0.14	6.26	0.14	6.63
		MG	6.79	0.14	6.27	0.13	6.80
		CG	6.50	0.01	6.22	0.16	6.49

YG=yogic group MG= Mallakhamb group CG=Control group

The tables-I the pre, post-test means, standard deviations and adjusted means on selected physical and performance variables of male kho-kho players were numerical presented. The analysis of covariance on selected variables of experimental groups and control group is presented in table – II

TABLE – II
COMPUTATION OF ANALYSIS OF COVARIANCE ON SELECTED PHYSICAL AND PERFORMANCE VARIABLES AMONG KHO-KHO PLAYERS

S.No	Variables	Test	Sum of variance	Sum of squares	Df	Mean square	F ratio
1	Cardiovascular Endurance	Pre-test	Between the group	1492.87	2	746.44	0.92
			Within the group	26602.69	33	806.14	
		Post-test	Between the group	47342.70	2	23671.35	9.94*
			Within the group	78582.09	33	2381.27	
		Adjusted means	Between the sets	48710.11	2	24355.05	10.26*
			Within the sets	75948.38	32	2373.38	
2	Explosive Power	Pre-test	Between the group	0.25	2	0.12	0.16
			Within the group	25.37	33	0.76	
		Post-test	Between the group	81.02	2	40.51	38.83*
			Within the group	34.42	33	1.04	
		Adjusted means	Between the sets	78.21	2	39.10	37.93*
			Within the sets	32.99	32	1.03	
3	Flexibility	Pre-test	Between the group	0.14	2	0.07	0.92
			Within the group	2.66	33	0.08	
		Post-test	Between the group	14.71	2	7.35	23.16*
			Within the group	10.48	33	0.31	
		Adjusted means	Between the sets	14.21	2	7.10	23.46*
			Within the sets	9.69	32	0.30	
4	Muscular Endurance	Pre-test	Between the group	0.38	2	0.19	2.25
			Within the group	2.80	33	0.08	
		Post-test	Between the group	34.93	2	17.46	38.26*
			Within the group	15.06	33	0.45	
		Adjusted means	Between the sets	33.80	2	16.90	37.40*
			Within the sets	14.46	32	0.45	
5	Balance	Pre-test	Between the group	1.34	2	0.67	0.92
			Within the group	23.94	33	0.72	
		Post-test	Between the group	170.79	2	85.39	33.95*
			Within the group	82.98	33	2.51	
		Adjusted means	Between the sets	167.71	2	83.85	32.85*
			Within the sets	81.67	32	2.55	
6	Performance	Pre-test	Between the group	0.01	2	0.007	0.33
			Within the group	0.72	33	0.02	
		Post-test	Between the group	0.52	2	0.26	19.62*
			Within the group	0.44	33	0.01	
		Adjusted means	Between the sets	33.80	2	16.90	37.40*
			Within the sets	14.46	32	0.45	

*Significant at 0.05level of confidences
(The table values required for significance at 0.05 level of confidence for 2 & 33 and 2 & 32 are 3.29 and 3.30 respectively).

In the table the results of analysis of covariance on cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and kabaddi playing ability. The obtained 'F' ratio of 0.92, 0.16, 0.92, 2.25, 0.92 and 0.33 for Pre-test means was less than the table value of 3.29 for df 2 and 33 required for significance at 0.05 level of confidence on cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and kho-kho playing ability. The obtained 'F' ratio of 9.94, 38.83, 23.16, 38.26, 33.95 and 19.62 for post-test means was greater than the table value of 3.29 for df 2 and 33 required for significance at 0.05 level of confidence on cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and kho-kho playing ability. The obtained 'F' ratio of 10.26, 37.93, 23.46, 37.40, 32.85 and 37.40 for adjusted post-test means was greater than the table value of 3.20 for df 2 and 32 required for significance at 0.05 level of confidence on cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and kabaddi playing ability. The result of the study indicated that there was a significant difference among the adjusted post test means of yogic practice group, mallakhamb group and control group on cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and kho-kho playing ability.

Since the obtained 'F' ratio value was significant further to find out the pair mean difference, the scheffe's test was employed and presented in table – III.

TABLE – III
THE SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST TESTS PAIRED MEANS ON CARDIOVASCULAR ENDURANCE, EXPLOSIVE POWER, FLEXIBILITY, MUSCULAR ENDURANCE, BALANCE AND PERFORMANCE VARIABLES

Yogic Practice Group	Mallakhamb Group	Control Group	Mean Difference	Confidence Interval
Cardiovascular Endurance				
2406.29	2396.73	…..	9.56	64.28
2406.29	…..	2323.69	82.60*	
…..	2396.73	2323.69	73.07*	
Explosive Power				
185.81	187.80	…..	1.99*	1.32
185.81	…..	184.18	1.63*	
…..	187.80	184.18	3.62*	
Flexibility				
21.58	22.32	…..	0.74*	0.66
21.58	…..	20.77	0.81*	
…..	22.32	20.77	1.55*	
Muscular Endurance				
34.63	35.71	…..	1.08*	0.85
34.63	…..	33.19	1.44*	
…..	35.71	33.19	2.52*	
Balance				
82.52	85.28	…..	2.76*	2.07
82.52	…..	79.98	2.54*	
…..	85.28	79.98	5.30*	
Performance				
6.63	6.80	…..	0.17*	0.09
6.63	…..	6.49	0.14*	
…..	6.80	6.49	0.34*	

*Significant at 0.05level of confidences

FIGURE-I
THE PRE, POST AND ADJUSTED MEAN VALUES OF CARDIOVASCULAR ENDURANCE, EXPLOSIVE POWER AND FLEXIBILITY OF EXPERIMENTAL GROUPS AND CONTROL GROUP

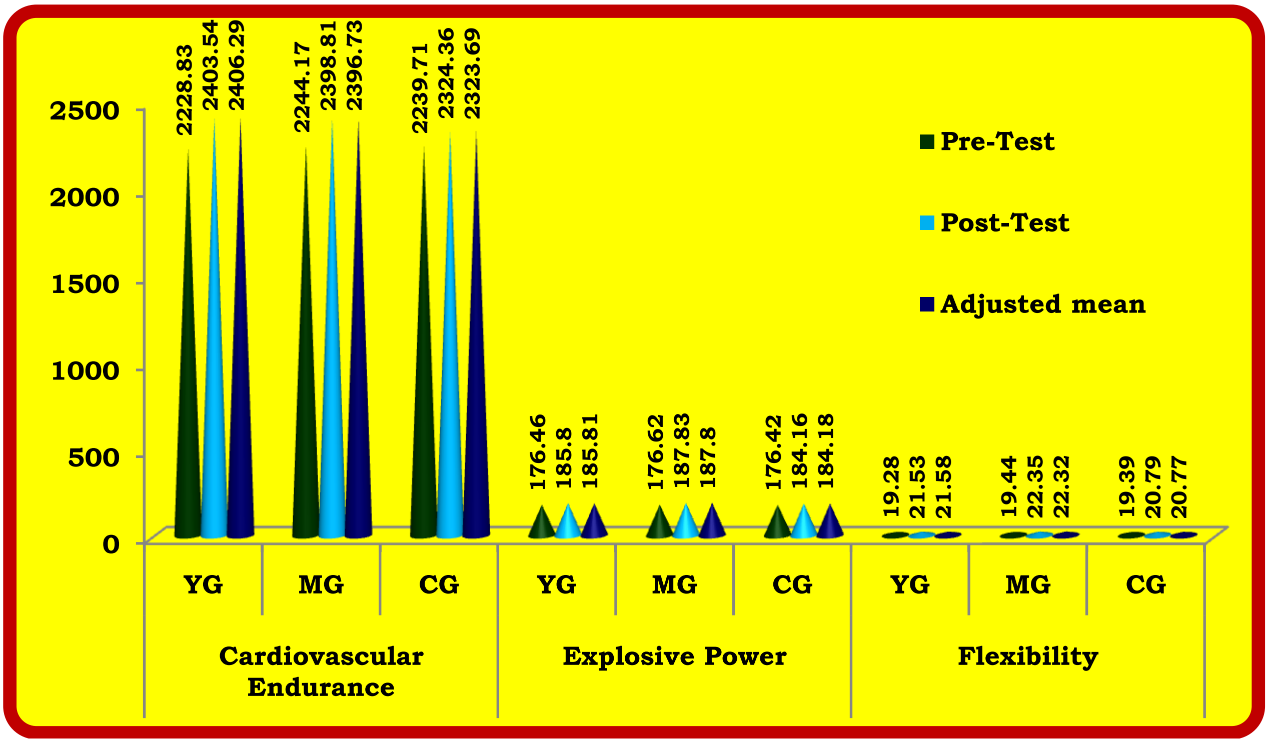
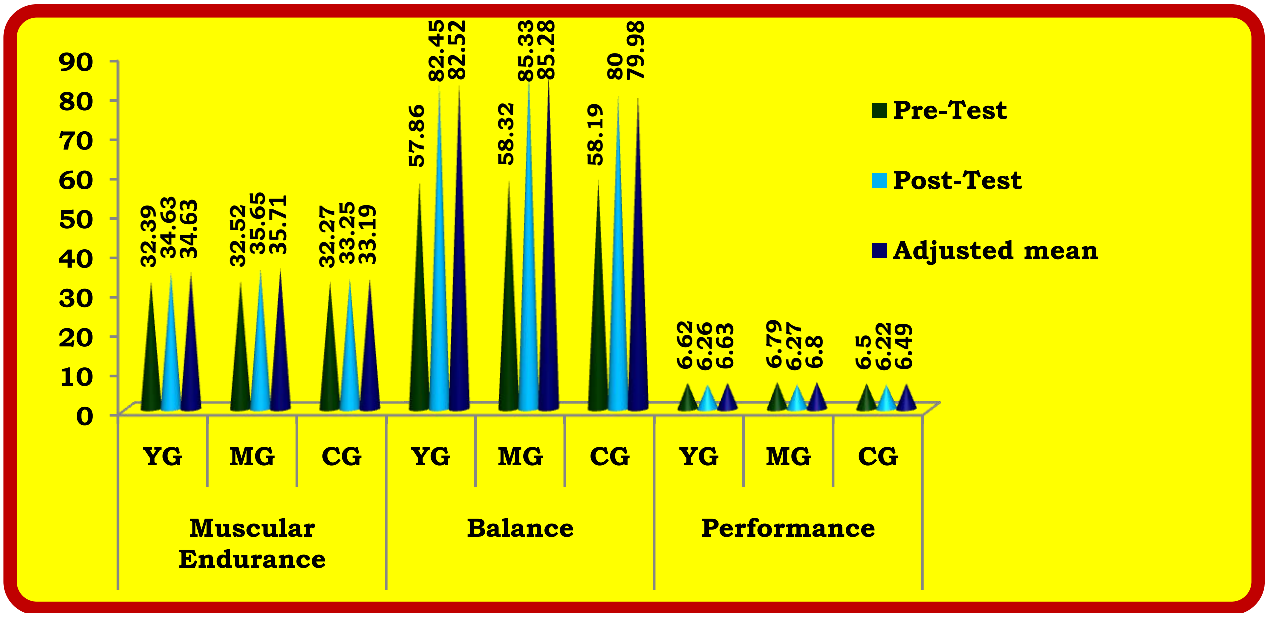


FIGURE-II
THE PRE, POST AND ADJUSTED MEAN VALUES OF MUSCULAR ENDURANCE, BALANCE AND PERFORMANCE VARIABLES OF EXPERIMENTAL GROUPS AND CONTROL GROUP



From the table-III, clear that the adjusted post test means are 2406.29, 2396.73 and 2323.69 respectively. The mean differences values are between yogic group and control group & Mallakhamb group and control group are 82.60 and 73.07 respectively cardio vascular endurance on are greater than the confidence interval value 64.28 at 0.05 level of confidence. The results of the study showed that there were a significant difference between yogic group and control group & Mallakhamb group and control on cardio vascular endurance.

From the table-III, clear that the adjusted post test means are 185.81, 187.80 and 184.18; 21.58, 22.32 and 20.77; 34.63, 35.71 and 33.19; 82.52, 85.28 and 79.98; 6.63, 6.80 and 6.49 respectively. The mean differences values are between yogic group and Mallakhamb group; yogic group and control group & Mallakhamb group and control group are 1.99,1.63 and 3.62; 0.74, 0.81and 1.55;1.08,1.44 and 2.52; 2.76, 2.54 and 5.30;0.17,0.14and 0.34respectively explosive power, flexibility, muscular endurance, balance and performance on are greater than the confidence interval value 1.32; 0.66; 0.85; 2.07 and 0.09 at 0.05 level of confidence. The results of the study showed that there were a significant difference between yogic group and Mallakhamb group; yogic group and control group & Mallakhamb group and control group on explosive power, flexibility, muscular endurance, balance and performance when yogic groups were compared Mallakhamb group showed significantly improvement.

Result and Discussions

The results of the study indicate that the experimental groups which underwent yogic group and Mallakhamb group had showed significant improved in the selected variables namely such as cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and performance when compared to the control group. The mallakhamb groups showed significant difference in as cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and performance variables improvement which due to 8 weeks of mallakhamb training, when compare with yogic group. The control group did not show significant improvement in any of the selected variables. The past studies on selected physical fitness components also Ganesh Babu and Chandrakumar (2015) found that significance improvement on speed and flexibility due to mallakhamb practices and Silambam practices. Suresh and madanmohan (2015) found that asana and asana&meditation group had positive impact on performance factor among college kho-kho players. VishwajitThakare (2015) found that 12 week of Mallakhamb exercise schedule was found effective in improving cardiovascular efficiency of high school student. Kagitha and Paul Kumar (2013).

Conclusions

From the analysis of data, the following conclusions were drawn.

1. The result reveals that the yogic and mallakhamb groups showed significant difference in all the selected variables such as cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and performance variables due to 8 weeks of mallakhamb training, when compare with control group.
2. The mallakhamb groupsshowed significant difference in as cardiovascular endurance, explosive power, flexibility, muscular endurance, balance and performance variables improvement which due to 8 weeks of mallakhamb training, when compare with yogic group.

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