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## **Influence of Mallakhamb Practices and Silambam Practices on Speed and Flexibility among U-19 Female Kho-Kho Players**

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### **Abstract**

The purpose of the study was to find out the Influence of Mallakhamb practices and Silambam practices on speed and flexibility among u-19 female Kho-Kho players. In order to achieve the purpose of the study forty five female district level Kho-Kho players, were randomly selected from Dindugal city schools and they were equally divided in to three groups of fifteen each as experimental group-I, experimental group-II and control group. The experimental groups and control group undergone normal routine Kho-Kho practices and in addition the experimental group-I underwent Mallakhamb practices and experimental group-II underwent Silambam practices for one hour in the morning sessions. The control group was not given any special training. The period of training was eight weeks in a schedule of weekly three days for alternate days. The data were collected on the selected dependent variables before and after the training period. The collected the data were statistically analyzed by using Analysis of Covariance (ANCOVA) and Scheffe's post hoc test. To test the significance .05 level of confidence was fixed. Based on the results the study it was concluded that the Mallakhamb practices and Silambam practices were significantly improved the speed and flexibility among district level Kho-Kho players.

**Keywords:** Mallakhamb, Silambam, Speed, Flexibility

### **Introduction**

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

Jim Rohn

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, 2005)<sup>[7]</sup>.

The origin of this ancient Indian sports can be traced to earlier part of 12th century. A mention of wrestlers exercising on wooden poles is found in the Manasholes, written by Chalukya in 1153 A.D. It was revived late in the 19th century by Balambhatta Dada Deodhar, physical instructor to Bajirao Peshwa-II. He took great efforts to popularize these sports. Resemblance of the shape of the Ancient and modern mallakhamb to the human structure can be easily seen. At first mallakhamb was always concerned with kusti, to learn different styles of kusti. Now a days the game also includes Gymnastics. It is leaving ancient grips. The present game includes supple body, alert muscles and mind, concentration and expansion of the muscles, rhythm in breath, eyes wide open etc. now a days at the competitive level the degree of difficulty is increasing day by day. This game is a mother discipline which builds an ideal physical body structure. The Mallakhamb needs concentration, speed and flexibility etc. required for the sports like football, swimming,

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Kho-Kho, tennis etc. can be improved by performing Mallakhamb. It is the only game which is played against gravity. It is a good exercise to our body especially for backbone. Our whole body gets a message while performing on Mallakhamb. So let's come together to promote the pure Indian activity.

India is a Land of Knowledge, where many Gods and Saints have given divine knowledge to lead a good human life. The art of Silambam also has age-old history in ancient texts of South India. Silambam denotes an elastic cane bamboo, uniform in cross section from end to end, having a length a little less than that of the height of the performer wielding it (David Manuel Raj 1967) [4]. Silambam is a common word now used in Tamil Nadu, for the Martial art of stick-fencing. In other parts of South India it is called by different names, such as Kolu Varasay or Dhonay Varasay in Karnataka, Kolu Aatta or Karadi Aatta in Andhra Pradesh, Neduvai in Kerala. Generally in silambam includes single stance (otrai suvado) separate stances, (pereevusuvado) double swing, weapons sequences, locks, throws long stick and short sticks series techniques are there (Arunachalam,1995) [1]. British government had banned the practice of warfare and martial art in any form in India and they knew the dangers of Indian martial art. British troops were well trained to use with explosive and guns, but they were lacking the physical compact skills. This fear leads them to impose restrictions on Indian martial arts. The Kampu Soothram most Ancient text of Siddha Agasthiyar tells his learning experience of Kampu (Staff or Silambam). Later Siddha Agasthiyar composed art of using Kampu (Staff or Silambam) for self-defense in poetic form. Today the original texts directly written on palm leaf by Siddha Agasthiyar are not available. Saints who lived with him have grasped the meaning of the Siddha Agasthiyar poetry and passed it to their students and to the next generation till today. Siddha Agasthiyar composed many Poems on Kundalini, Varma, Kutthu Varasai, Siddha Vidhyam, Kampu Soothram and many other spiritual scripts and in this context Siddha Agasthiyar can be termed as the father of modern Martial Arts, which is practiced all over the world today. Even today we are looking in for the origination of the modern martial art; a scientific martial art that can protect human lives at dangerous situation. Today the great martial art of Tamilnadu is just reduced to a demonstration art in public gatherings and folk art festivals despite the effort of many well-wishers. Silambam has the potential to be included as a mainstream activity in the physical education curriculum as it is simple, inexpensive and also has the capability of improving all the major biomotor abilities. There are many benefits to training in the martial arts. What often attracts students to the martial arts is the attempt to enhance not only the physical body but the mind and spirit as well. According to a study by Twemlow and coworkers (1996), the top four reasons that people cite for studying the martial arts are self-defense, exercise, building self-confidence, and developing self-discipline. There is very few literature available on the effects of Silambam training on these selected variables among Indian population in general and girls in particular. The present study was taken up to investigate the Influence of Mallakhamb practices and Silambam practices on speed and flexibility among u-19 female kho-kho players.

### Methodology

The purpose of study was to investigate the influence of mallakhamb practices and Silambam practices on speed and

flexibility among u-19 female Kho-Kho players. In order to achieve the purpose of the study 45 female district level Kho-Kho players were selected randomly and they were equally divided in to three groups of 15 each as experimental group-I, experimental group-II and control group. The experimental groups and control group undergone normal routine Kho-Kho practices and in addition the experimental group-I underwent Mallakhamb practices and experimental group-II underwent Silambam practices for one hour in the morning before starting the routine Kho-Kho practices. The control group was not given any special training. The period of training was 8 weeks in a schedule of weekly 3 days for alternate days. The data was collected on the variables of speed and flexibility before and after the training period. The collected the data were statistically analyzed by using Analysis of Covariance (ANCOVA) and Scheffe's post hoc test. To test the significance .05 level of confidence was fixed.

### Criterion Measures

Table I

Variables	Test	Measurers in Unit
Speed	50mts Run	Seconds
Flexibility	Sit and Reach	Centimeters

### Results and Discussion

The analysis of covariance and Scheffe's post hoc test on the data obtained on speed, flexibility of experimental and control groups have been analyzed and tabulated in Table-II, Table-III, Table-IV and Table-V.

### Reviews and Literature

Mohanavalli P *et al*, (2013) [9] the effect of Silambam practice on body composition and cardio vascular endurance among college girls. Silambam fencing is a martial art native to the soil of Tamil Nadu. It has been originated from 3000 B.C and practiced by the pre-historic Dravidian Tamils who were dwelling from the Mohan-ja-daro & Harappa regions and is still practiced today. To achieve the purpose of this study, 40 sedentary college girls were selected as subjects. The age of the subjects were ranged from 18 to 20 years. The subjects were further classified at random into two equal groups of 20 subjects each. Group - I underwent Silambam training for three days per week for sixteen weeks and group - II acted as control. The selected criterion variables namely body weight, BMI, lean body mass, percent body fat and cardio vascular endurance were assessed before and after the training period. The collected data were statistically analysed by using Analysis of Covariance (ANCOVA). From the results of the study it was found that there was a significant improvement in cardio vascular endurance and significant reduction in body weight, BMI, lean body mass, and percent body fat with no significant change in agility among the experimental group when compared with the control group. Finally the investigator was concluded On the basis of the results obtained it was concluded that Silambam training resulted in a significant increase in cardio vascular endurance and a significant reduction in body weight, BMI, lean body mass, and percent body fat among college girls

Baljinder Singh Bal *et al*. (2012) [2] study was to determine the effects of 6-week rope mallakhamb training on speed of movement, vital capacity and peak expiratory flow rate. The research population included 30 inter college girls (Mean  $\pm$  SD: age 21.33  $\pm$  1.43 years, height 1.67  $\pm$  0.036m, body

mass 62.50 ± 3.55 kg) of Guru Nanak Dev University, Amritsar, Punjab. They were purposively assigned into rope mallakhamb (M) and control (C) groups, n = 15 each. The M group was subjected to 6-week training consisting of various asanas (i.e., Bajrang pakad, Padamasana, Dhanurasana, Needle, Nidrasana, Paschimottanasana, A Ari and Simple cross) the control group participated in the routine yoga mallakhamb training not containing the asanas mentioned. The level of  $p \leq 0.05$  was considered significant. The 6-week rope Mallakhamb training brought about significant improvement in speed of movement ( $t = 3.45$ ), vital capacity ( $t = 2.98$ ) and peak expiratory flow rate ( $t = 1.82$ ) in Group (M) as compared with the control one. The 6-week rope

mallakhamb training had significant effect on speed of movement, vital capacity and peak expiratory flow rate. Thus, such mallakhamb training may be recommended to improve speed of movement, vital capacity and peak expiratory flow rate may contribute to enhance concentration based performance and voluntary control of breathing. Finally the investigator was concluded the findings of the study will help to understand the benefits of rope Mallakhamb training had significant effect on speed of movement, vital capacity and peak expiratory flow rate. The present manuscript will also be useful feedback for one and all concerned with these mallakhamb players.

**Table II:** Analysis of Covariance for Pre and Post Tests Data on Speed of Experimental and Control Groups

	Control Group	Mallakhamb practice	Silambam practice	Source of Variance	Sum of Squares	Df	Mean Squares	'F' Ratio
Pretest	7.95	7.82	7.79	Between	0.60	2	0.15	0.81
				Within	15.92	42	0.37	
Post test	7.91	7.51	7.49	Between	3.42	2	1.71	5.89*
				Within	12.35	42	0.29	
Adjusted Post test	7.87	7.53	7.51	Between	0.89	2	0.45	7.50*
				Within	2.36	41	0.06	

\*Significance at 0.05 level, df 2 and 42= 3.22, 2 and 41=3.23

Table II shows that the pretest means on speed of control, Mallakhamb practice and Silambam practice groups are 7.95, 7.82 and 7.79 respectively. The obtained 'F' ratio value of 0.81 for pretest mean is less than the required table value of 3.22 for significance at 0.05 level. Hence, it is not significant. The post-test mean on speed of control, Mallakhamb practice and Silambam practice groups are 7.91, 7.51 and 7.49 respectively. The obtained 'F' ratio value of 5.89 for post-test data is greater than the required table value of 3.22 for significance at 0.05 level.

The adjusted post-test mean on speed of control, Mallakhamb practice and Silambam practice groups are 7.87, 7.53 and 7.51 respectively. The obtained 'F' ratio value of 7.50 for adjusted post-test data is greater than the required table value of 3.23 for significance at 0.05 level. It reveals that there is significant difference among the groups on speed as a result of Mallakhamb practice and Silambam practice. The post-hoc test was applied to find out the significant paired mean difference.

**Table III:** Ordered Scheffe's Post Hoc Test for Mean Difference between Groups on Speed

Control	Mean values		Mean Difference	L S
	Mallakhamb practice	Silambam practice		
7.87	7.53	-	0.34	0.05
7.87	-	7.51	0.36	0.05
-	7.53	7.51	0.02	NS

L S = Level of Significance, C I = Confidence Interval. at 0.05 level: 0.26

Table III shows that the ordered weighted mean difference of Scheffe's post-hoc test values on speed of the control group, Mallakhamb practice and Silambam practice group. The mean difference of speed is significant at 0.05 level of confidence. The difference in means between control group and Mallakhamb practices didn't differ significantly and control group and Silambam practice group on speed. Rest of the paired means didn't differ significantly.

**Table IV:** Analysis of Covariance for Pre and Post Tests Data on Flexibility of Experimental and Control Groups

	Control Group	Mallakhamb practice	Silambam practice	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pretest	29.37	29.52	29.57	Between	2.91	2	0.97	0.14
				Within	427.88	42	10.16	
Post test	30.60	32.07	32.77	Between	78.97	2	39.49	3.77*
				Within	439.27	42	10.45	
Adjusted Post test	30.77	32.11	32.76	Between	69.60	2	34.80	6.48*
				Within	220.45	41	5.37	

\*Significance at 0.05 level, df 2 and 42= 3.22, 2 and 41=3.23

Table IV shows that the pretest means on flexibility of control, Mallakhamb practice and Silambam practice training groups are 29.37, 29.52 and 29.57 respectively. The obtained 'F' ratio value of 0.14 for pretest mean is less than the required table value of 3.22 for significance at 0.05 level. Hence, it is not significant.

The post-test mean on flexibility of control, Mallakhamb practice and Silambam practice groups are 30.60, 32.07 and 32.77 respectively. The obtained 'F' ratio value of 3.77 for

post-test data is greater than the required table value of 3.22 for significance at 0.05 level.

The adjusted post-test mean on flexibility control, Mallakhamb practice and Silambam practice groups are 30.77, 32.11 and 32.76 respectively. The obtained 'F' ratio value of 6.48 for adjusted post-test data is greater than the required table value of 3.23 for significance at 0.05 level. It reveals that there is significant difference among the groups on flexibility as a result of Mallakhamb practice and

Silambam practice. The post-hoc test was applied to find out the significant paired mean difference.

**Table V:** Ordered Scheffe's Post Hoc Test for Mean Difference between Groups on flexibility

Mean values			Mean Difference	L S
Control	Mallakhamb Practice	Silambam practice		
30.77	32.76	-	1.99	0.05
30.77	-	32.11	0.95	0.05
-	32.76	32.11	0.65	NS

L S = Level of Significance, C I = Confidence Interval. at 0.05 level: 0.89.

Table V shows that the ordered weighted mean difference of Scheffe's post-hoc test values on flexibility of the control group, Mallakhamb practices and Silambam practices group. The mean difference of flexibility is significant at 0.05 level of confidence. The difference in means between control group and Mallakhamb practice, control group and Silambam practice group on flexibility. Rest of the paired means didn't differ significantly.

### Discussion on Findings

In the recent times Mallakhamb practices and Silambam practices is offered as a better method for developing speed and flexibility. The results and discussions of the present studies proved that the Silambam training procedure was beneficial for improving the significant increase in cardio vascular endurance and a significant reduction in body weight, BMI, lean body mass, and percent body fat among college girls and this study was supported by Mohanavalli P *et al*, (2013) <sup>[9]</sup> and they found that twenty four weeks there was significant improved in cardio vascular endurance, and a significant reduction in body weight, BMI, lean body mass, and percent body fat among 40 sedentary college girls due to the influence of Silambam training and another study was Baljinder Singh Bal *et al*, (2012) <sup>[2]</sup> study was to determine the effects of 6-week rope mallakhamb training on speed of movement, vital capacity and peak expiratory flow rate. The study will help to understand the benefits of rope Mallakhamb training had significant effect on speed of movement, vital capacity and peak expiratory flow rate. The present manuscript will also be useful feedback for one and all concerned with these mallakhamb players.

### Conclusions

From the results of the study and discussion the following conclusions were drawn.

1. There is a significant difference on speed and flexibility between all the groups.
2. There is a significance improvement on speed and flexibility due to mallakhamb practices and Silambam practices.

### Recommendations

1. Similar study may be conducted for various age groups.
2. The same study may be extended to further time period.
3. The present study is mainly focused on females only. The same study may be done on males

### References

1. Arunachalam A, Thenpandaya thamizhyarin silambam varalaruim, Adimuraikalam, 1995; 1:9

2. Baljinder Singh Bal, Parminder Jeet Kaur, Davinder Singh. Effects of 6-week rope mallakhamb training on speed of movement, vital capacity and peak expiratory flow rate, Brazilian Journal of Biomotricity, 2012; 6(1):25-32.
3. Cubild Collins. English Language dictionary, London: Williams Collins Jones and company, 1987.
4. David Manuel Raj J. Silambam: Technique & Evalation, (Master's (M P E) Degree, 1967.
5. Thesis in Physical Education submitted to the Jiwaji University. Gwalior, India, 259.
6. Heyward VH. Advanced Fitness Assessment and Exercise Prescription, Human Kinetics publication, Champaign, 2006.
7. Kendre UN. Effect of explosive strength, speed, endurance and agility training, 2005.
8. On performance of kho kho, Unpublished Doctoral Thesis, Gwalior: Lnupe.
9. Mohanavalli P, Sreedhar K, Jothy. Effect of silambam practice on body composition, and cardiovascular endurance among college girls, International Journal of Physical Education, Fitness and Sports. 2013, 2(4), ISSN 2277-5447
10. Twemlow SW, Lerma BH, Twemlow SW, An analysis of students reasons for studying martial arts, Percept Mot Skills; 1996; 83(1):99-103.
11. Thirumalaisamy R, Statistics in Physical Education, Karaikudi: Senthil Publication, 1988.
12. <http://www.motivational-well-being.com/leadership-quotes.html>
13. <http://on.wikipedia.org/wiki/mallakhamb.html>