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## EFFECT OF LADDER TRAINING ON AGILITY AMONG KHO KHO PLAYERS

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**Abstract:** To achieve the purpose of this study, 20 men Kho Kho players were randomly selected as subjects from the St. Xavier's college, Palayamkottai, Tirunelveli, Tamilnadu, India. Their age ranged from 18 to 25 years. The selected participants were randomly divided into two groups such as group 'A' ladder training (n=10) and group 'B' acted as control group (n=10). Group 'A' underwent ladder training for five days per week and each session lasted for an hour for eight week. Control group was not exposed to any specific training but they were participated in regular activities. The "Illinois Agility Test" (seconds) was used to measure agility were selected as variables. The pre and post tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the dependent 't' test and Analysis of co-variance (ANCOVA). The level of significant was fixed at 0.05 level. It was concluded that the ladder training group had shown significantly improved in agility. However the control group had not shown any significant improvement on agility

**Index Terms – Kho Kho Players, Men, Agility, Ladder Training**

### 1. INTRODUCTION

The word Training has been a part of a human language since ancient times. It denotes the preparation of some task. This process in variably extends to number of days and even more than years. The term Training is widely used in sports. There is however, some disagreement among coaches and also among sports scientist regarding the exact meaning of this word some example especially belonging to sports medicine, understand sports training as basically doing physical exercises. Training improves the functioning of the circulatory and respiratory and the muscle system, while practice is largely aimed at improving the control of muscular activity by the nervous system. Sports training is characterized by a continuous control and regulation. Systematic nature of the training process is reflected adequately by the fact that the various means and methods, load dynamics, training tasks etcetera are all planned in order to achieve short- or long-term goals, keeping in view the interrelations of various training elements, cyclic nature of performance developments and long-term goal of sports training. The determination of performance structure is a very difficult task and till now sports scientists and coaches have not been able to satisfactorily tackle this task. A systematic and integrated effort by the various training scientists in class co-operation with the coaches is needed for effectively meeting this challenge. A beginning has been made in this direction and after some years perhaps, we would be in a position to determine satisfactorily the structure of performance in various sports. This would decidedly have a positive effort on better and systematic formulation of the training process (Singh, 1984). Ladder drills are an important part of many team sport workouts. They require athletes to move their feet quickly in a precise and specified motion. Athletes must pay attention to perform the agility ladder drills accurately and quickly. Agility ladder drills benefit an athlete by teaching him to move in a swift yet deliberate fashion. This is important for athletes of every shape and size. Ladder training is the multi-directional training, because of the elements of strength, power, balance, agility, co-ordination, proprioception, core and joint stability, foot speed, hand eye coordination, reaction time and mobility. Each component should be integrated in to daily training session. Ladder skills are fun and

functional ways to teach movement skills, by training, the body and mind to understand a variety of foot combinations (Jamil, 2015).

## 2. METHODOLOGY

To achieve the purpose of this study, 20 men Kho Kho players were randomly selected as subjects from the St. Xavier's college, Palayamkottai, Tirunelveli, Tamilnadu, India. Their age ranged from 18 to 25 years. The selected participants were randomly divided into two groups such as group 'A' ladder training (n=10) and group 'B' acted as control group (n=10). Group 'A' underwent ladder training for five days per week and each session lasted for an hour for eight week. Control group was not exposed to any specific training but they were participated in regular activities. The "Illinois Agility Test" (seconds) was used to measure agility were selected as variables. The pre and post tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the dependent 't' test and Analysis of co-variance (ANCOVA). The level of significance was fixed at .05 level of confidence, which was considered as appropriate

## 3. RESULTS AND DISCUSSIONS

**TABLE-1**  
**MEANS AND DEPENDENT 'T' TEST FOR THE PRE AND POST TESTS ON AGILITY OF EXPERIMENTAL AND CONTROL GROUP**

Criterion variables	Test	Experimental Group Mean	Control Group Mean
Agility	Pre test	19.46	19.51
	Post test	18.13	19.48
	't'test	12.45*	0.97

\*Significant at .05 level. (Table value required for significance at .05 level for 't'-test with df 9 is 2.26)

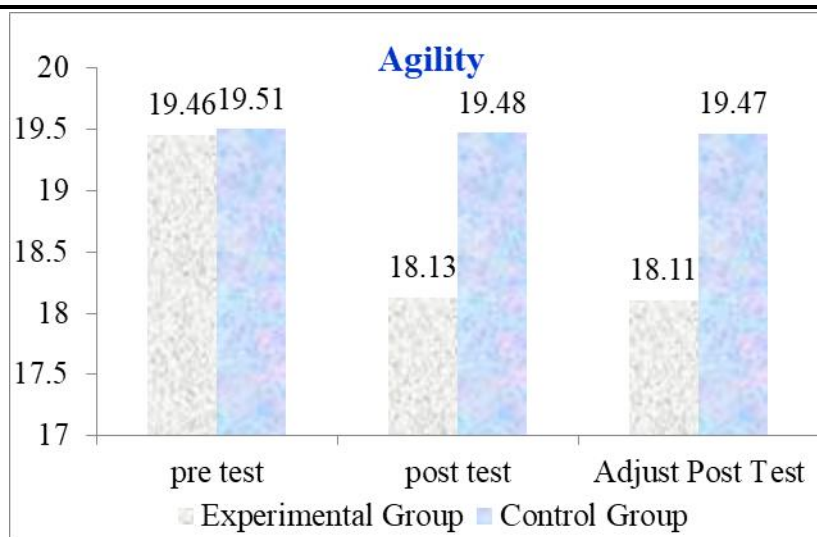
The table-1 shows that the pre-test mean value of experimental and control groups on Agility are 19.46 and 19.51 respectively and the post test means are 18.13 and 19.48 respectively. The obtained dependent t-ratio values between the pre and posttest means of ladder training and control groups are 12.45 and 0.97 respectively. The table value required for significant difference with df 9 at 0.05 level is 2.26. From the above table the dependent 't'-test value of agility between pre and post tests means of experimental group was greater than the table value 2.26 with df 9 at .05 level of confidence, it was concluded that the experimental group had significant improvement in the agility when compared to control group.

**TABLE-2**  
**COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE AGILITY OF EXPERIMENTAL AND CONTROL GROUPS**

	Experimental Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Square	F
Agility (Adjusted PostMean)	18.11	19.47	BG	54.76	1	54.76	37.25*
			WG	30.87	17	1.47	

\* Significant at 0.05 level. Table value for df 1, 17 was 4.45

Table-2 shows that the adjusted post test means values on Agility of experimental and control groups 18.11 & 19.47 respectively. The obtained f-ratio of 37.25 for adjusted post test mean is greater than the table value 4.45 with df 1 and 17 required for significance at 0.05 level of confidence. The results of the study indicated that there was a significant mean difference exist between the adjusted post test means of ladder training and control groups on Agility.



The bar diagram figure-1 shows that the mean values of pre, post and adjusted post tests on Agility of ladder training and control groups.

#### 4. DISCUSSION ON FINDINGS

The present study demonstrates a statistically significant improvement in agility among male Kho Kho players who incorporated ladder training into their training regimen. These results support the growing body of evidence suggesting that ladder drills enhance movement efficiency, coordination, and quick directional changes—key components of agility in fast-paced sports like Kho Kho. The findings align with those of Jamil, Aziz, and Hooi (2015), who reported that agility ladder training significantly enhances lower-limb coordination and speed, leading to improved performance in sports requiring rapid movements. Similarly, Pawar and Borkar (2018) emphasized that structured agility training programs contribute to better neuromuscular adaptation, allowing athletes to respond swiftly to game situations. The current study's results reinforce these previous conclusions, further confirming the efficacy of ladder training in sports where agility is crucial. One possible explanation for the observed improvement is that ladder training helps in developing foot speed, balance, and neuromuscular control, which are essential for swift, multidirectional movements in Kho Kho. By regularly engaging in these drills, players likely enhanced their ability to decelerate, change direction, and accelerate quickly—skills that are critical for dodging, chasing, and maneuvering within the game. Moreover, the structured nature of ladder drills might have contributed to improved proprioception and coordination, resulting in a more efficient execution of complex movement patterns during matches. The findings suggest that integrating ladder drills into Kho Kho training regimens can serve as an effective strategy to enhance agility and overall athletic performance. However, while the study presents compelling evidence in favor of ladder training, it is important to consider factors such as training duration, intensity, and individual fitness levels, which could influence the extent of improvement. Future research should explore long-term effects and compare ladder training with other agility-enhancing methods to determine the most effective approach for Kho Kho players.

#### 5. CONCLUSION

Within the limitations and delimitations of this study the following conclusions were drawn from the result.

1. There was significant improvement on Agility due to the effect ladder training among kho kho players.
2. However the control group had not shown any significant improvement on any of the selected variables.

#### 6. REFERENCES

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