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AN IMPACT OF LADDER TRAINING, SKILL TRAINING AND COMBINED TRAINING ON SPEED PERFORMANCE OF ANNA UNIVERSITY WOMEN BASKETBALL PLAYERS

Physical Education

Dr. M. Gopinath Deputy Director of Physical Education, Anna University College of Engineering, BIT campus. Tiruchirappalli, Tamilnadu, India.

ABSTRACT

Aim of the study was designed to find out the impact of Ladder training, Skill training and Combined training of Speed performance of Anna University women Basketball Players. To attain the purpose, sixty (N=60) women Basketball Players who have participated in the Anna University inter collegiate Basketball Tournament during the year 2016-2017 were randomly selected as subjects. The subjects were assigned at random into four groups of fifteen each (n=15). Group-I underwent Ladder training, Group-II underwent Skill training, Group-III underwent Combined Ladder and Skill Training and Group-IV acted as Control. The duration of the training period for all the three Experimental groups was restricted to twelve weeks and the number of sessions per week was confined to three in a week. For Combined Ladder and Skill Training the training period was restricted to alternative weeks for twelve weeks. The dependent variable selected for this study was Speed and it was assessed by 50 Meters Run Test. All the subjects were tested prior to and immediately after the training for all the selected variables. Data were collected and statistically analyzed using ANCOVA. Scheffe's post hoc test was applied to determine the significant difference between the paired means. In all the cases 0.05 level of significance was fixed. The results of the study showed that there was a significant difference was found among all the Experimental groups namely Ladder Training, Skill Training and Combined Ladder and Skill Training groups had significantly increase in the Speed. Further the results of the study showed that Combined Ladder and Skill Training group was found to be better than the Ladder Training group and Skill Training group in Speed.

KEYWORDS

Speed Performance, Ladder Training, Skill Training, Combined Training

INTRODUCTION

Training implies the process of preparation for some task. This process varyingly extends to a number of days or months or even years. The term "Training" is widely used in sports. There is however, some disagreement among sports coaches and also among sports scientists regarding the exact meaning of this word ***(Singh, 1991).***

The word 'Training' has been a part of human language since ancient times. It denotes the process of preparation for some tasks. Some experts, especially those belonging to sports medicine, understand sports training as basically doing physical exercises. Several terms used in training by experts e.g. strength training, interval training, technical and tactical training reflect their time of thinking ***(Singh, 1991).***

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 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 mind and body to understand a verity of foot combinations.

There are 4 basic skills is used when training with ladder. Runs, skips, shuffles and jump/hops.

Ladder drills are fun and functional ways to teach movement skills. Although linear and lateral movements are biomechanical simple, their combination can be complex and many times overwhelming for the athlete. Buy teaching the mind and body to understand a variety of foot combinations, the chance for confusion and subsequent error decreases. Ladder drills should be learned in a slow controlled environment. Introducing movement skills too rapidly can ingrain poor motor patterns that may be difficult to override. Skilled movement should be optimized before the drill is advanced. The first type of drills is steady state drills. These drills focus on quickness endurance and utilize a constant rhythm throughout the ladder. The second types of drills are burst drills. These drills focus on the ability to turn on rapid burst of foot movement. The third types of drills are elastic response drills. These drills focus on improving the reactive speed components of the lower leg.

METHODOLOGY

The study was conducted on sixty women athletes who have participated in Anna University inter collegiate Basketball Tournament during the year 2016-2017 were randomly selected as subjects. Subjects were randomly assigned equally into four groups. Group-I underwent Ladder training, Group-II underwent Skill training, Group-III underwent Combined Ladder and Skill Training and Group-IV acted as Control. The experimental groups underwent the respective training for a period of 12 weeks (3 days/week), the Combined Ladder and Skill Training the training period was restricted to alternative weeks for twelve weeks whereas the control remain as normal with the sedentary life. Speed was selected as dependent variable and it was assessed by 50 Meters Run test ***(Natarajan, 2014)***. All the four groups were tested on selected Speed was analyzed before and after the training period.

ANALYSIS OF THE DATA

The data collected from the experimental groups and control group on prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. Whenever they obtained f-ratio value in the simple effect was significant the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. In all the cases 0.05 level of significance was fixed.

The Analysis of covariance (ANCOVA) on Speed of Experimental Groups and Control group have been analyzed and presented in Table - 1.

Table – 1
Values of Analysis of Covariance for Experimental Groups and Control Group on Speed

Certain Variables	Adjusted Post test Means				Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
	Ladder Training Group	Skill Training Group	Combined Ladder and Skill Training Group	Control Group					
Speed	7.12	7.08	6.61	7.15	Between With in	5.24 3.07	3 55	1.75 0.06	29.17 *

**** Significant at.05 level of confidence***

(The table value required for Significance at 0.05 level with df 3 and

55 is 2.77)

Table-1 shows that the adjusted post test mean value of Speed for Ladder Training group, Skill Training group, Combined Ladder and Skill Training group and Control group is 7.12, 7.08, 6.61 and 7.15 respectively. The obtained F-ratio of 29.17 for the adjusted post test mean is more than the table value of 2.77 for df 3 and 55 required for significance at 0.05 level of confidence.

The results of the study indicate that there are significant differences among the adjusted post test means of Experimental groups on the decrease of Speed.

To determine which of the paired means had a significant difference, Scheffe's test was applied as Post hoc test and the results are presented in Table-2.

Table - 2
The Scheffe's test for the differences between the adjusted post tests paired means on Speed

Certain Variables	Adjusted Post test Means				Mean Difference	Confidence Interval
	Ladder Training Group	Skill Training Group	Combined Ladder and Skill Training Group	Control Group		
Speed	7.12	7.08			0.04*	0.03
	7.12		6.71		0.41*	0.03
	7.12			7.15	0.03*	0.03
		7.08	6.71		0.37*	0.03
		7.08		7.15	0.07*	0.03
			6.71	7.15	0.44*	0.03

**** Significant at.05 level of confidence***

Table-2 shows that the adjusted post test mean differences on Speed between Ladder Training and Skill Training, Ladder Training and Combined Ladder and skill training group, Ladder training and control group, Skill training group and Combined Ladder and Skill training group, Skill Training group and Control group, Combined Ladder and skill training and Control group are 0.04, 0.41, 0.03, 0.37, 0.07 and 0.44 respectively and they are greater than the confidence interval value 0.03, which shows significant differences at 0.05 level of confidence.

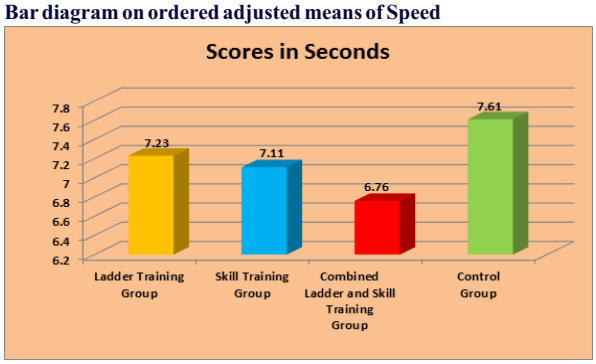
The results of the study further have revealed that there is a significant difference in Speed between the adjusted post test means of Ladder Training and Skill Training, Ladder Training and Combined Ladder and skill training group, Ladder training and control group, Skill training group and Combined Ladder and Skill training group, Skill Training group and Control group, Combined Ladder and skill training and Control group.

However, the decrease in Speed was significantly higher for Combined Ladder and Skill training group than other Experimental groups.

It may be concluded that the Combined Ladder and Skill training group has exhibited better than the other experimental groups in decreasing Speed.

The adjusted post test mean value of experimental groups on Speed is graphically represented in the Figure -1.

Figure-1
Bar diagram on ordered adjusted means of Speed



CONCLUSION

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

1. Significant differences in achievement were found between Ladder Training group, Skill Training group, Combined Ladder and Skill Training group and Control group in the selected criterion variable such as Speed.
2. The Experimental groups namely, Ladder Training group, Skill Training group and Combined Ladder and Skill Training group had significantly improved in Speed.
3. The Combined Ladder and Skill Training group was found to be better than the Ladder Training group, Skill Training group and Control group in decreasing Speed.

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