



Influence of Jump Rope Training on Selected Speed Parameters among U-19 Divisional Horizontal Jumpers

Dr.M.Selvam¹ & Dr.T.Ganesh Babu²

¹Director of Physical Education, Alagappa University College of Arts and Science, Paramakudi, Tamilnadu, India.

²Physical Education Teacher, Government Higher Secondary School, Odaipatti, Oddanchatram, Dindigul, Tamilnadu, India.

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Abstract

The purpose of the study was to find out the Influence of jump rope training on selected speed parameters among U-19 divisional horizontal jumpers. In order to achieve the purpose of the study 24 under-19 men Madurai division horizontal jumpers (Long jump & Triple jump) were selected randomly and they were equally divided in to two groups of 12 each as experimental and control group. The control group undergone normal routine athletic training and in addition the experimental group undergone jump rope training for one hour in the morning before starting the athletic training. The control group was not given any special training. The period of training was 8 weeks in a schedule of weekly 5 days. The data were collected on the selected variables before and after the training period. Analysis of Covariance (ANCOVA) was used to analyze the data. To test the significance 0.05 level of confidence was fixed. Based on the results the study it was concluded that the jump rope training significantly improved the speed parameters among horizontal jumpers.

Keywords: Jump Rope Training, Speed, Stride length, Stride frequency.

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Introduction

Physical education is the secret of the success of our body engine. This education is giving you knowledge about the physical, which is the most important for the body fitness. This physical education knowing many things such as how to take care of your mind, toward happiness, wealth, body and about of your health. This education is creating of your good behavior that is most important. It is the serious matter if we are work of our health it is creating of our body healthy and fitness. Here, is most important think that is needed to attend the various sports. That is help to achieve the various goals. The primary aim of physical education is not to develop star athletes, winning team of export performance, but natural vitality with character values and physical fitness. It aim and develop youth into citizens, who have the capacity to enjoy with vigor and interest in life. "In the end, it's extra effort that separates a winner from second place. But winning takes a lot more that, too. It starts with complete command of the fundamentals. Then it takes desire, determination, discipline, and self-sacrifice. And finally, it takes a great deal of love, fairness and respect for your fellow man. Put all these together, and even if you don't win, how can you lose?" - Jesse Owens

Correspondence

Dr.M.Selvam

E-mail: drselvam.mathavan@gmail.com, Ph. +9198945 65056

Jump Rope Training

A jump rope exercise is the best aerobic training exercise. It is a simple exercise of jumping the rope and any one can jump at a rope near his or her feet. This exercise needs no more equipment but a pair of jumping sneakers and a jumping rope. The best thing about this is that it is convenient for any age. Improving the cardiovascular and respiratory system, Strengthening the wrists, forearms, shoulders, upper leg, and especially the calves and balls of the feet, Increases in physical stamina, coordination, reflexes and vertical leap. Simple to learn and skills develop quickly, Very small amount of space necessary to do. For the polar bears like me, it is unquestionably the safest outdoor winter exercise. (Pooranachandran M, 2012)

Speed

Speed is the quickness of movement of a limb. Whether this is the legs of a runner or arm of the shot putter. Speed is an integral part of every sport can be expressed as anyone or combination of maximum speed, elastic strength (power) and speed endurance. (Uppal A.K, 1983)

Stride Length

Stride length is distance from the heel print of one foot to the heel print of the other foot .This is the distance travelled forward by a single leg. (John W Burn, 1964)

Stride Frequency

Stride frequency is measured by the number of strides taken in a given amount of time or over a given distance .The more often the feet touch the ground , the faster the potential running speed. (John W. Burn, 1964)

Methodology

The purpose of study was to investigate the Influence of jump rope training on selected speed parameters among U-19 divisional horizontal jumpers. In order to achieve the purpose of the study 24 under-19 men Madurai division horizontal jumpers (Long jump & Triple jump) were selected randomly and they were equally divided in to two groups of 12 each as experimental and control group. The control group undergone normal routine athletic training and in

addition the experimental group undergone jump rope training (JRTG) for one hour in the morning before starting the athletic training. The control group (CG) was not given any special training. The period of training was 8 weeks in a schedule of weekly 5 days. The data were collected on the selected variables before and after the training period. Analysis of Covariance (ANCOVA) was used to analyze the data. To test the significance 0.05 level of confidence was fixed.

Results and Discussion

The analysis of covariance on the data obtained on speed, stride length and stride frequency due to the effect of experimental and control group have been analyses and presented in table I.

Table I. Analysis of Covariance of Experimental and Control Groups on Selected Variables

Variables	Adjusted post test means		Source of Variance	SS	DF	MS	‘F’ Ratio
	JRTG	CG					
Speed	7.19	7.45	Between	0.378	1	0.38	14.62*
			With in	0.021	21		
Stride Length	1.68	1.61	Between	0.031	1	0.03	30.00*
			With in	0.011	21		
Stride Frequency	3.47	3.85	Between	0.755	1	0.76	10.78*
			With in	0.07	21		

*Significant at 0.05 level of confidence. df (1, 21) = 4.32.

Table I shows that the obtained ‘f’ ratio value were 14.62, 30.00 and 10.78 which were higher than the table value 4.32 with df 1and 2 required to be significant at 0.05 level. Since the obtained ‘f’ ratio is higher than the table value and if indicates that there was a significant different among the adjusted post-test means of the experimental group and control group on selected speed parameters.

Discussion on Findings

In the resent times jump rope training is offered as a better method for developing speed, stride length and Stride frequency. The results and discussions of the present study proved that the said training procedure was beneficent for improving the explosive power of sprinters and this study was supported the study conducted by Pooranachandran M., (2012) and they found that six weeks of plyometric and jump rope training on explosive power among college men volleyball players .

Conclusions

In the basis of results and discussion the following conclusion were drown.

1. The jump rope training had significantly improved the speed, stride length and stride frequency.
2. There was significant difference among the adjusted post-test mean of experimental group and control group on selected speed parameters.

Recommendations

Similar study may be conducted for various age groups.

1. The same study may be extended to further time period.
2. The present study is mainly focused on males only.
3. The same study may be done on females.

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