



Effect of Specific Training Methods on Selected Speed Performance among Women Basketball Players

V. Raja Saro¹ & Dr. A. S. Nageswaran²

¹Physical Directress, Ranees Government Higher Secondary School, Pudukkottai, Tamilnadu, India.

²Associate Professor, Department of Physical Education, H.H The Rajah's College, Pudukkottai, Tamilnadu, India.

Received 25th August 2015, Accepted 15th November 2015

Abstract

The purpose of this study was to find out the effect of specific training methods on selected Speed performance among women Basketball players. For this purpose, forty five women Basketball players selected from various colleges affiliated to Bharathidasan University, Tiruchirappalli during the academic year of 2014-2015 were selected as subjects. The age, were ranged between 18 to 21 years. Subjects were divided into three equal groups of fifteen namely Plyometric training group, Weight training group and Control group. Experimental group such as Plyometric training group, Weight training group underwent respective training for 12 weeks duration. The dependent variable selected for this study was Speed. Speed was assessed through 50 meters run test. All the subjects were tested prior to and immediately after the training period of twelve weeks for all the selected variables. The data collected data from the three groups prior to and immediately after the training programme on the selected criterion variables were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's post hoc test was followed to determine which of the paired mean differences was significant. In all the cases 0.05 level of confidence was fixed to test the hypotheses. Speed showed significant difference among the groups. Plyometric training group showed better performance than other selected groups.

Keywords: Speed, Plyometric Training, Weight Training.

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Introduction

Training is good for the development of the cardiovascular system. "It enables athletes to recover from tough workouts and helps to develop the capacity to increase repetitions" (Singh, 1991). "Training improves the functioning of the circulatory, respiratory and the muscular systems, while practice is largely aimed at improving the control of muscular activity by the nervous systems" (Kenneth, 1976). Systematic nature of the training process is reflected adequately by various means and methods and dynamic training tasks etcetera are all planned in order to achieve short or long term goals, keeping in view the interrelations of various elements, cyclic nature of performance, developments of long term goals of sports training.

Sport specific training is simply fitness and performance training designed specifically for athletic performance enhancement. Training programs for athletic performance enhancement could include such areas as strength, speed, power, endurance, flexibility, mobility, agility, mental preparedness (including goal setting), sleep, recovery/regeneration techniques and

strategies, nutrition, rehabilitation, pre-habilitation, and injury risk reduction. The actual term 'plyometrics' was first coined in 1975 by Fred Wilt, the American Track and Field coach. The elements ply and metric come from Latin roots for "increase" and "measure" respectively, the combination thus means 'measurable increase' (Baechle, 1994). Plyometrics is the term now applied to exercises that have their roots in Europe, where they were first known simply as jump training. Interest in this jump training increased during the early 1970s as East European athletes emerged as powers on the world sport scene. As the Eastern bloc countries began to produce superior athletes in such sports as track and field, gymnastics and weight lifting the mystique of their success began to center on their training methods. Resistance training is a method of improving muscular strength by gradually increasing the ability to resist force through the use of free weights, machines, or by using the person's own body weight. Strength training sessions are designed to impose increasingly greater resistance, which in turn stimulates development of muscle strength to meet the added demand (Mosby, 2009).

Methodology

To purpose of this study was to effect of specific training methods on selected Speed Performance among women Basketball players. The study was

Correspondence

Dr. A. S. Nageswaran

E-mail: asnageshwaran@gmail.com, Ph. +9194892 50500

conducted on forty five (N=45) women Basketball players who were randomly selected from various Arts and Science Colleges of Bharathidasan University, Tiruchirappalli Tamil Nadu, India. All the Subjects selected for this study had represented Inter-Collegiate women Basketball tournaments academic in the year 2014-2015 whose ages ranged between 18 to 21. The selected players was assigned in to three groups of fifteen each (n=15), Group –I underwent Plyometric training, Group –II underwent Weight training and Group III acted as Control. Speed was selected as dependent variable and it was assessed by 50 meters run test. All the subjects were tested prior to and immediately after the training period of twelve weeks for all the selected variable. The data collected data from

the three groups prior to and immediately after the training programme on the selected criterion variable were statistically analyzed with Analysis of Covariance (ANCOVA). Whenever the 'F' ratio for adjusted post test means was found to be significant, Scheffe's post hoc test was followed to determine which of the paired mean differences was significant. In all the cases .05 level of confidence was fixed to test the hypotheses.

Results and Discussion

The Analysis of covariance (ANCOVA) on Speed of Plyometric training, Weight training and Control group have been analyzed and presented in Table -I.

Table I. Analysis of Covariance on Speed of Plyometric Training, Weight Training and Control Group

Certain Variables	Adjusted Post test Means			Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
	Plyometric Training Group-(I)	Weight Training Group-(II)	Control Group (III)					
Speed	6.64	7.12	7.51	Between	5.12	2	2.56	10.67*
				With in	9.73	41	0.24	

**Significant at 0.05 level of confidence*

(The table value required for significance at .05 level with df 2 and 41 is 3.23)

Table I shows that the adjusted post test mean values of Speed for Plyometric training, Weight training and Control group are 6.64, 7.12 and 7.51 respectively. The obtained F-ratios was 10.67 is more than the table value 3.23 for df 2 and 41 required for significance at 0.05 level of confidence. The results of the study indicate

that there is a significant difference exists among the adjusted post test means of experimental groups showing the decrease in Speed. To determine which of the paired means had a significant differences, Scheffe's test was applied as Post hoc test and the results are presented in Table II.

Table II. The scheffe's test for the differences between the adjusted post tests paired means on speed

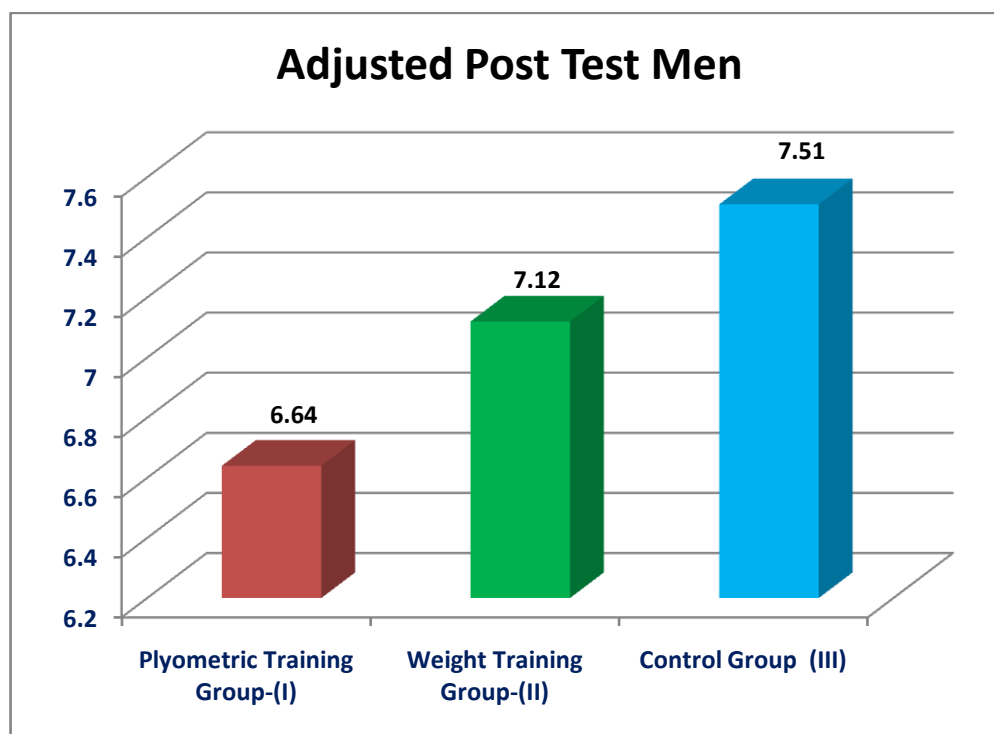
Certain Variables	Adjusted Post test Means			Mean Difference	Confidence Interval
	Plyometric Training Group-(I)	Weight Training Group-(II)	Control Group (III)		
Speed	6.64	7.12		0.48*	0.44
	6.64		7.51	0.87*	0.44
		7.12	7.51	0.39*	0.44

** Significant at .05 level of confidence*

Table-II shows that the adjusted post test mean for differences on speed between Plyometric training group and Weight training group, Plyometric training group and Control group, Weight training group and

Control group are 0.48, 0.87 and 0.39. The values are greater than the confidence interval 0.44, which shows significant differences at 0.05 level of confidence.

Figure I. The adjusted post test means values of Plyometric Training group, Weight training group and Control group on Speed



Conclusion

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

1. The Experimental groups had registered significant improvement on the selected criterion variables namely Speed.
2. It may be concluded that the Plyometric training group is better than Weight training group and Control group in improving Speed.

References

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