



Enhancements of Resistance Training and Pilates Exercises on Speed Performance among College Men Football Players

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Abstract

The present study was designed to find out the enhancements of resistance training and pilates' exercises on speed performance among college men football players. To attain the purpose, forty five (N=45) men Football players studying various Arts & Science Colleges, affiliated to Annamalai University, Annamalainagar, Tamilnadu, India, during the year 2014-2015 were selected as subjects. The age of the subjects were ranged from 17 to 22 years. Among various sports specific trainings only, Resistance training, Pilates training was selected for this study. The subjects were divided at random into three groups of fifteen each (n=15). Group-I underwent Resistance Training, Group-II underwent Pilates Exercises and Group-III acted as Control. All the subjects were tested prior to and immediately after the training for all the selected variables. The dependent variable selected for this study was Speed, and it was assessed by 50 Meters run test. Data were collected before and after the training period of 12 weeks. One way ANCOVA was used to find out the significant differences. 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 among the Experimental groups and control group on Speed performance. Further, the results of the study showed Pilates Exercises group was better than Resistance training group and Control Group in Speed performance.

Keywords: Resistance Training, Pilates Exercises, Speed.

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Introduction

Weight training is using of resistance over the weight of the body to develop specific areas of the body. Generally it is used to develop muscular strength and power. It also develops muscular endurance, elasticity and co-ordination (Anderson, 1987). Resistance training is the use of systematic exercises with weight and it is used merely as a means to increase resistance of the muscle contraction. The primary objective is not to learn to lift as much weight as possible, but to increase strength and power for application to some other sports.

Resistance training refers to an interest in physical fitness or importance of being strong in a particular sport. It is not usually an end in itself but as a means to an end. Pilates is a physical fitness system developed in the early 20th century by Joseph Pilates. It is practiced worldwide, and especially in western countries such as Canada, the United States and the United Kingdom. As of 2005, there were 11 million people practicing the discipline regularly and 14,000 instructors in the United States (Ellin, 2005). Pilates technique is regarded one of the modern techniques in

training in general and volleyball training in particular. Pilates technique is regarded of exercises that helps to give the right form of body without prominent muscles and strengthen weak muscles. He looks upon it as an exercise which helps elongate the short muscles through concentrating on one muscular set without causing intense of other muscles of the body (Akin et al., 2007).

Methodology

The study was conducted on forty five (N=45) men Football players studying various Arts & Science Colleges, affiliated to Annamalai University, Annamalainagar, Tamilnadu, India, during the year 2014-2015 were selected as subjects. The age of the subjects were ranged from 17 to 22 years. Among various sports specific trainings only, Resistance training, Pilates training was selected for this study. The subjects were divided at random into three groups of fifteen each (n=15). Group-I underwent Resistance Training, Group-II underwent Pilates Exercises and Group-III acted as Control. The experimental groups underwent the respective training for a period of 12 weeks (3 days/week), whereas the control remain as normal with the sedentary life. 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

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variables.

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 I. 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
	Resistance Training Group – (I)	Pilates Exercises Group – (II)	Control Group – (III)					
Speed	6.72	6.26	7.11	Between	8.32	2	4.16	69.33*
				With in	2.64	41	0.06	

* Significant at .05 level of confidence

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

Table-1 shows that the adjusted post test mean value of Speed for Resistance Training, Pilates Exercises and Control Group, are 6.72, 6.26, and 7.11 respectively. The obtained F-ratio of 69.33 for the adjusted post test mean is more than the table value of 3.23 for df 2 and 41 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 and Control Group 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 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
	Resistance Training Group – (I)	Pilates Exercises Group – (II)	Control Group – (III)		
Speed	6.72	6.26		0.46*	0.22
	6.72		7.11	0.39*	0.22
		6.26	7.11	0.85*	0.22

* Significant at .05 level of confidence

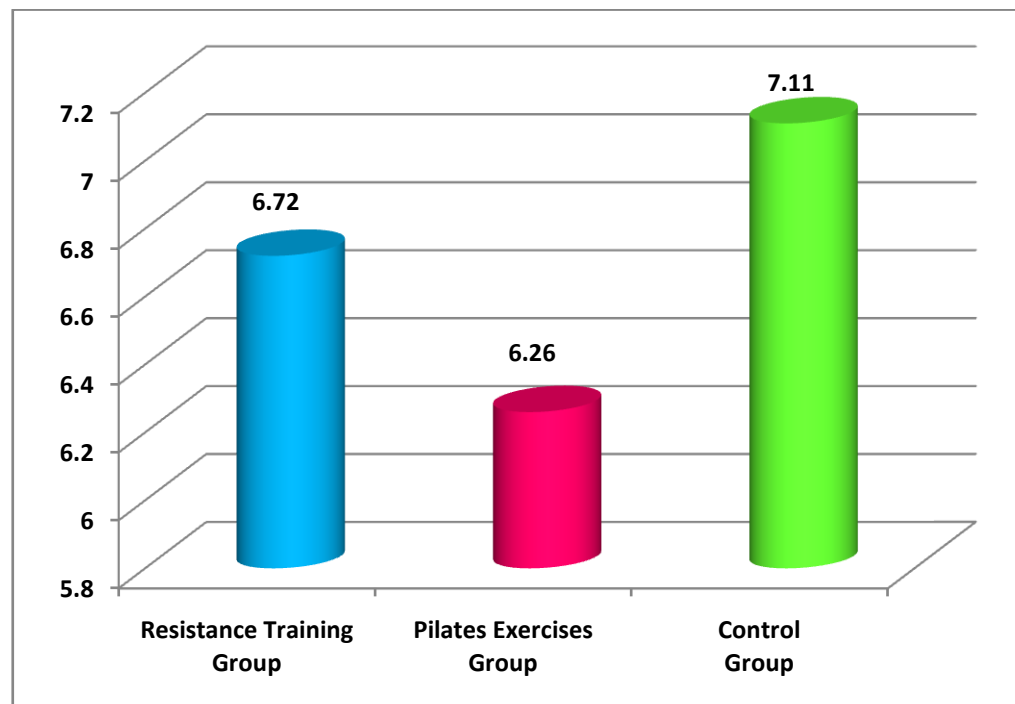
Table 2 shows that the adjusted post test mean difference Speed on Resistance Training group and Pilates Exercises group, Resistance Training group and Control group, Pilates Exercises group and Control group are 0.46, 0.39 and 0.85 respectively, these values are greater than the confidence interval value 0.22 which shows significant differences at 0.05 level of confidence. It may be concluded from the results of the study that there is a significant difference in Speed between the

adjusted post test means of Resistance Training group and Pilates Exercises group, Resistance Training group and Control group, Pilates Exercises group and Control group. However, the improvement in Speed was significantly decreased for Pilates Exercises group than Resistance Training group and Control Group.

It may be concluded that the Pilates Exercises group is better than the other Resistance Training group in improving Speed. The adjusted post test means values

of experimental groups and control group on Speed are graphically represented in the Figure-1.

Figure I. 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 Resistance Training group, Pilates Exercises group and Control group in the selected criterion variables such as Speed.
2. The Experimental groups namely, Resistance Training and Pilates Exercises group had significantly improved in Physical Fitness variables such as Speed.
3. The Pilates Exercises was found to be better than the Resistance Training group in increasing Speed.

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