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Effect of Pilates exercise training and medicine ball training on speed and explosive strength variables among men inter collegiate football players

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Abstract

To achieve the purpose of the study, 90 men students as subjects among the intercollegiate football players, Kerala. They were studying in college under the Calicut University. The subjects represented for their intercollegiate football tournament. The subjects will be randomly selected for this study the it divided in to three equal groups experimental group I Pilates exercise experimental group II medicine ball training and group III control group each group has 30 subjects. Finally the medicine ball training (MBT) group had improved on speed, explosive strength significantly than the other group of PT, CG.

Keywords: Pilates exercise training, medicine ball training, explosive strength football players

1. Introduction

Joseph Hubertus Pilates was born in a small town in Germany in 1880. He is said to have suffered with rickets and asthma. A frail and sickly child, Joseph began at a very early age to study human biology and nature to try to heal himself. He was an avid learner and studied such things as yoga, meditation, karate and some fitness practices of the ancient Greeks. He soon began to discover that physical fitness was keeping him healthy. By the age of 14, he was healthy and fit enough to have become proficient at skin diving, gymnastics and skiing. He studied how animals move in nature, how infants progress physically the first couple of years of life and discovered that with a combination of East and West, yogic and gymnastic, mental and physical exercises he could strengthen the body and free the mind. He was about to create the conditioning system that we today call, Pilates.

Medicine ball training can be effective in improving muscular strength, and movement velocity is a critical factor in power development. Plyometrics increase the power of the movement by harnessing the natural elastic components of the muscles and tendons as well as the stretch reflex. These quick movements develop explosive power through muscular actions. Medicine ball training is one of the many components in an individual's routine. Medicine ball exercises promote variety by introducing a novel stimulus for physiological adaptation. Training with a medicine ball helps to develop total body power, muscular endurance and flexibility. Exercises involving tossing and catching the ball are typically classified as a plyometric exercise (a specific type of exercise utilizing the stretch-shortening cycle of the muscle to produce power). Although used as part of strength and conditioning programs, medicine balls typically do not provide a sufficient load to produce the overload needed to create strength gains in certain exercises. However, they do provide a more comfortable and feasible means of safely increasing the load for certain exercises, and improvement in muscular power have been demonstrated, especially for upper body movements. Football is the perhaps the most demanding of all sports. In the modern game football train and conditioning is essential. Few sports are played on as large a playing field, lasting as long and without regular rest periods.

2. Methodology

To achieve the purpose of the study, 90 men students as subjects among the intercollegiate football players, Kerala. They were studying in college under the Calicut University.

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The subjects represented for their intercollegiate football tournament. The subjects will be randomly selected for this study the it divided in to tree equal groups experimental group I Pilates exercise experimental group II medicine ball training and group III control group each group has 30 subjects. All subjects in the experimental group were given their respective training programme 4 days in a week for 12 weeks duration in addition to the regular physical education activities of department. The subjects were free to withdraw their consent in case of feeling any discomfort or

injuries during the period of their participation, however there were no drop out in the study.

Table 1

S. No.	Criterion Variables	Test Items	Unit of Measurement
1	Speed	50 Meters Run	Time
2	Explosive Strength	Vertical Jump	Centimeters

Result and Discussion

Table 2: Analysis of Covariance of Pilates Training, Medicine Ball Training, Control Group on Speed

	Source of variance	Sum of squares	df	Mean square	F-value
Pre-test	BG	0.046	2	0.023	0.08
	WG	22.434	87	0.258	
Post-test	BG	1.687	2	0.844	3.66
	WG	20.050	87	0.230	
Adjusted Mean	BG	1.564	2	0.782	53.35
	WG	1.260	86	0.015	

*significant level 0.05 level (3.101, 3.102)

Table 1.2 reveals that the computation of ‘F’ ratio on pre-test, post-test and adjusted post-test mean of Pilates training, medicine ball training and control group on speed.

The obtained ‘F’ ratio for the pre-test mean of Pilates training, medicine ball training and control group on speed was 0.08, since F - value was less than the required table value of 3.101 for the degree of freedom 2 and 87, it was significant at 0.05 level of confidence.

The obtained ‘F’ ratio for the post test mean of Pilates training, medicine ball training and control group on speed was 3.66, since F - value was higher than the required table value of 3.101 for the degree of freedom 2 and 87, it was significant at 0.05 level of confidence.

The obtained ‘F’ ratio for the adjusted post-test mean of Pilates training, medicine ball training and control group on speed was 53.35, since F - value was higher than the required table value of 3.102 for the degree of freedom 2 and 86, it was

significant at 0.05 level of confidence.

Table 3: Scheffe’s Test for the Difference between the Adjusted Post Test Means on Speed

PT	MBT	CG	M.D	C.I
6.58	6.56	-	0.02	0.08
6.58	-	6.85	0.27	0.08*
-	6.56	6.85	0.29*	0.08*

* Significant at 0.05 level (CI) Value: 0.08

From the result it was inferred that the twelve weeks of medicine ball training (MBT) group had improved on speed significantly than the other training group of PT, CG. Further, twelve weeks of medicine ball training (MBT) group had higher improvement in speed when compared with control group (CG).

Table 4: Analysis of Covariance of Pilates Training, Medicine Ball Training, Control Group on Explosive Strength

	Source of variance	Sum of squares	df	Mean square	F-value
Pre-test	BG	40.289	2	20.144	1.14
	WG	1534.833	87	17.642	
Post-test	BG	537.622	2	268.811	19.06
	WG	1226.60	87	14.099	
Adjusted Mean	BG	312.336	2	156.168	90.38
Adjusted Mean	BG	312.336	2	156.168	90.38

*significant level 0.05 level (3.101, 3.102)

Table 1.4 reveals that the computation of ‘F’ ratio on pre-test, post-test and adjusted post-test mean of Pilates training, medicine ball training and control group on Explosive Strength.

The obtained ‘F’ ratio for the pre-test mean of Pilates training, medicine ball training and control group on explosive strength was 1.14, since F - value was less than the required table value of 3.101 for the degree of freedom 2 and 87, it was significant at 0.05 level of confidence.

The obtained ‘F’ ratio for the post test mean of Pilates training, medicine ball training and control group on explosive strength was 19.06, since F - value was higher than the required table value of 3.101 for the degree of freedom 2 and 87, it was significant at 0.05 level of confidence.

The obtained ‘F’ ratio for the adjusted post-test mean of Pilates training, medicine ball training and control group on

explosive strength was 90.38, since F - value was higher than the required table value of 3.102 for the degree of freedom 2 and 86, it was significant at 0.05 level of confidence.

Table 5: Scheffe’s Test for the Difference between the Adjusted Post Test Means on Explosive Strength

PT	MBT	CG	M.D	C.I
47.90	49.49	-	1.59	0.98
47.90	-	44.94	2.96	0.98
-	49.49	44.94	4.55	0.98

* Significant at 0.05 level (CI) Value: 0.98

From the result it was inferred that the twelve weeks of medicine ball training (MBT) group had improved on explosive strength significantly than the other training group of PT, CG. Further, twelve weeks of medicine ball training

(MBT) group had higher improvement in explosive strength when compared with control group (CG).

3. Conclusion

1. It was concluded that individualized twelve weeks of medicine ball training (MBT) group had improved on speed significantly than the other group of PT, CG.
2. It was concluded that individualized twelve weeks of medicine ball training (MBT) group had improved on explosive strength significantly than the other group of PT, CG.

4. Reference

1. Lorne Goldenberg, Peter Twist. Strength Ball Training. United State Human Kinetic Publishers, INC. 2007, 1.
2. Sharma NP, Vivek Pandey. Soccer. New Delhi: Khel Sahitya Kendra, 2007.
3. Narasimham TK. Introduction to Sports Training. New Delhi, Crescent, 2009.
4. Harthayal Singh. Science of Sports Training. New Delhi Publication, 1991.
5. Patti A, *et al.*, Effects of pilates exercise programs in people with chronic low back pain: a systematic review. Medicine (Baltimore), 2015.
6. Uppal AK. Science of Sports Training. New Delhi: Friends Publication, 2009.