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Content of the Table

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Effect of plyometric training on speed and Agility of volleyball players.

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Abstract: The purpose of this research study was to look at the effect of different plyometric training in speed and agility on volleyball players. This research study was limited to male volleyball players only. In this research study, a total of 40 subjects were randomly selected from the state level volleyball players in the age group of 14 to 19 years in Valsad district of South Gujarat. In this research study, 20 players were divided into two groups for plyometric training and 20 players for the control group. This research study consisted of 06 weeks of plyometric training. In the measurement scale speed was measured 50meter running and agility was measured by the shuttle run. In this research study 40 subjects were selected by random method. The plyometric training group would have 20 subjects and the control group had 20 subjects. Speed and agility components were pre-tested on each group. The experimental training group was then given plyometric training for 06 weeks and the controlled group was exempted from training. After the completion of the training program, both groups were given a test of speed and agility components. On the information obtained from the experimental group and the control group, validity was checked at level 0.05 by applying diffraction, covariance analysis (ANCOVA). The findings of which were as follows. There was a significant improvement in the speed of subjects selected from the systematic 06-week plyometric training program. The systematic 06-week plyometric training program showed a significant improvement in the agility of selected subjects.

Introduction:

The game of volleyball begins in the YMCA of America. (Young Men's Christian Association) This organization has played an important role in spreading the development of this game. Due to his tremendous efforts, the sport was first organized as a national sport outside of Europe in Canada (1900) and then in Cuba, France and then in 1922 at New York as a national sport. During this time the old rules concerning the game were reconsidered and some new rules pertaining to it were implemented. UPS in 1928 The Volleyball Association was founded and at the same time national competitions were held in the United States every year. The volleyball was demonstrated at the 1936 Olympics in Berlin. The volleyball was also included in the 1939 World University Sports Festival. The game of volleyball flourished during World War II from 1939 to 1945, as many soldiers during their World War-II training period, as well as some of the captive soldiers of the time, took a keen interest in the game. The International Volleyball Federation was established in 1947 and its existing rules were changed. All of this is YMCA. It can be said that it was made possible only by the organization.

A certain limit of plyometrics originated in Europe. When they knew about jump training. Prior to the 1970s, the greater interest in jumping training had the influence of Eastern European athletes(players) on world sports unimaginable. American sports coaches were more forward-thinking. The earliest is traced to the Latin language. Plyometric means 'extremely strong'. Where foreign exercises were believed to be consistently competitive and developed, Eastern European ideas of superiority existed in sporting activities. Plyometrics have consistently been used by coaches and athletes (Players) for exercise and discipline training purposes and

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understand that power is produced by combining force with speed during movement. In plyometric training, the player jumped, lifted, or threw was most important.
Aspects like high speed, endurance, muscle strength, agility, flexibility, etc. are considered important in sports. A high level of physical fitness is considered more important than anything else among players. It is difficult to succeed in sports activities like handball, basketball, volleyball, hockey, athletics, etc. without the necessary aspects of physical fitness. Hence, speed and agility are important in any sport.
In today's fast-paced competitive era, preparations for games are made to the players with the goal of "win only play". Trainings are given to keep the mental strength of the players very high. In today's competitive era, new records are being set within a short span of time on world level. Speed is an important attribute of today's game. Earlier, the records that were created in sports were attached to the name of a single player for years. But that is not the case today because the scientific training and the equipment used in the game are manufactured using modern methods. That being said, diet is equally important to a nutritious diet. Due to these reasons, there is a stark difference in today's sports and sports performance and physical activities.

OBJECTIVE OF THE STUDY:

The purpose of this research study was to examine the effect of different plyometric training on speed and agility on volleyball players.

Selection of Subjects:

This research study was limited to male volleyball players only. In this research study, a total of 40 subjects (Players) were randomly selected from the state level volleyball players in the age group of 14 to 19 years of Valsad district of South Gujarat region. In this research study, 20 players were divided into two groups, plyometric training and 20 players as a control group. In this research study 06 weeks of plyometric training was given.

Standards of measurement

Sr. No	Variable	Test	Measurement
1	Speed	50 meters Run	Time
2	Agility	Shuttle Run	Time

Method

In this research study 40 subjects were selected by random method. 20 subjects were kept in plyometric training group and 20 subjects were kept in control group. Speed and agility components were pre-tested on each group. Then the experimental training group was given plyometric training for 6 weeks and the control group was kept free of training. After completion of the training program both groups were post-tested on speed and agility components.

Statistical Procedure

The significance was tested at 0.05 level by applying analysis of variance, covariance (ANCOVA) on the obtained data of experimental group and control group.

Result

Tabel-1

Covariance analysis of variance of an experimental and a control group of speed test performance

Test	Group	Sum of Square		Mean (MSS)	F

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	Plyometric Training	Control			Degree of Freedom		
Pre-Test Mean	9.68	9.76	B	0.16	1	0.16	0.37
			W	17.37	38	0.45	
Post-Test Mean	9.04	9.85	B	6.06	1	6.06	15.85*
			W	14.41	38	0.37	
Adjusted Mean	9.07	9.82	B	5.05	1	5.05	17.82*
			W	10.50	37	0.28	

Significance Level 'F' = 0.05 (1,38) = 4.098 & (1,37) = 4.105

In the above table – 1 the 'F' ratio of pre-test medians of speed test performance was found to be 0.37. Which compared to the table value (4.098) was not found to be significant at 0.05 level. The 'F' ratio of the final test mean of both groups was found to be 15.85. Which compared to the table value (4.098) was found to be significant at 0.05 level. Also, the 'F' ratio of the corrected mean was found to be 17.82. Comparing it with the table value (4.105) was found to be significant at 0.05 level.

Tabel-2

Covariance analysis of variance of an experimental and a control group of agility test performance

Test	Group		Sum of Square		Degree of Freedom	Mean (MSS)	F
	Plyometric Training	Control					
Pre-Test Mean	11.37	11.59	B	0.34	1	0.34	0.85
			W	15.47	38	0.40	
Post-Test Mean	11.24	11.63	B	1.87	1	1.87	4.30*
			W	16.66	38	0.43	
Adjusted Mean	11.32	11.55	B	0.73	1	0.73	5.35*
			W	5.09	37	0.13	

Significance Level 'F' = 0.05 (1,38) = 4.098 & (1,37) = 4.105

In the above table – 2 the 'F' ratio of the pre-test mean of agility test performance was found to be 0.85. which compared to the table value (4.098) was not found to be significant at the 0.05 level. The 'F' ratio of the mean of the final test of both groups was found to be 4.30. Which compared to the table value (4.098) was found to be significant at 0.05 level. Also, the 'F' ratio of the corrected mean was found to be 5.35. Comparing it with the table value (4.105) was found to be significant at 0.05 level.

Conclusions:

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- 06-week plyometric training program of the method showed a significant improvement in the speed of selected subjects.
- 06-week plyometric training program of the method showed significant improvement in agility of selected subjects.

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