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IMPACT OF VARIED INTENSITIES OF PLYOMETRIC TRAINING ON SELECTED SKILL PERFORMANCE OF MALE VOLLEYBALL PLAYERS

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Abstract: The purpose of the study was to find out the impact of varied intensities of plyometric training on selected skill performance of male volleyball players. It was hypothesized that there would have been a significant effect of experimental groups on selected skill performance of male volleyball players than the control group.For the present study 30 volleyball players from Chennai, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. For the present study pre test – post test randomized group design which consists of control group and experimental group was used. The subjects were randomly assigned to three equal groups of fifteen each. Group I acted as low intensity plyometric training and group II acted as high intensity plyometric training and group III acted as control group. Skill performance variables namely overhead pass and fore hand pass were measured using brady volleyball skill test. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) technique and the level of significance was set at 0.05.The findings of the present study have strongly indicates that six weeks of experimental groups have significant effect on selected skill performance variables i.e., over head pass and fore hand pass of volleyball players. Significant effect of both low and high intensity plyometric training was found on over head pass and fore hand pass among volleyball players.

Key words: Plyometric, Volleyball, Pass, Intensity.

1. Introduction

Plyometric also known as "plyos" is a type of exercise training designed to produce fast, powerful movements, and improve the functions of the nervous system, generally for the purpose of improving performance in sports. Plyometric exercises may also be referred to as explosive exercises. Plyometric movements, in which a muscle is loaded and then contracted in rapid sequence, use the strength, elasticity and innervations of muscle and surrounding tissues to jump higher, run faster, throw farther, or hit harder, depending on the desired training goal. Plyometric is used to increase the speed or force of muscular contractions, providing explosiveness for a variety of sport specific activities. Plyometric has been shown across the literature to be beneficial

to a variety of athletes. Benefits range from injury prevention, power development and sprint performance amongst others **(Donald, 1998).**

2.Objective of the Study

The purpose of the study was to find out the impact of varied intensities of plyometric training on selected skill performance of male volleyball players. It was hypothesized that there would have been a significant effect of experimental groups on selected skill performance of male volleyball players than the control group.

3.Procedure and Methodology

For the present study 30 volleyball players from Chennai, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. For the present study pre test – post test randomized group design which consists of control group and experimental group was used. The subjects were randomly assigned to three equal groups of fifteen each. Group I acted as low intensity plyometric training and group II acted as high intensity plyometric training and group III acted as control group. Skill performance variables namely overhead pass and fore hand pass were measured using brady volleyball skill test. The data was collected before and after twelve weeks of training. The data was analyzed by applying Analysis of Co-Variance (ANCOVA) technique and the level of significance was set at 0.05.

4.Results and Discussion on Findings

The findings pertaining to analysis of co-variance between experimental group and control group on selected skill performance of male volleyball players for pre-post test respectively have been presented in table No. I to III.

Table - 1

Descriptive Analysis of Selected Skill Performance of Male Volleyball Players

Sl. No	Variables	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean
Low Intensity Plyometric Group						
1	Over head pass	22.13	1.59	27.86	1.18	27.86
2	Fore head pass	22.40	1.35	27.20	1.47	27.20
High Intensity Plyometric Group						
1	Over head pass	22.46	1.64	27.60	1.18	27.60
2	Fore head pass	22.06	1.62	27.40	1.05	27.40
Control Group						
1	Over head pass	22.53	1.24	22.66	1.49	22.66
2	Fore head pass	21.86	1.45	22.79	1.75	22.86

The above table documents the pre & post tests means, standard deviations and adjusted mean values of experimental and control groups on selected skill performance of male volleyball players.

Table - 2

Computation of Analysis of Covariance on Experimental and Control Groups on Selected Skill Performance of Male Volleyball Players

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Square	F
1	Over head pass	BG	255.56	2	127.78	74.13*
		WG	70.66	41	1.72	
2	Fore hand pass	BG	268.01	2	134.00	72.54*
		WG	75.73	41	1.84	

* Significant at 0.05 level*F 0.05 (2,41) = 3.22

Table No. II revealed that the obtained 'F' value for over head pass and fore hand pass, were 74.13 and 72.54 respectively was found to be significant at 0.05 level with df 2, 41 as the tabulated value of 3.22 required to be significant at 0.05 level. The same table indicated that there was a significant difference in adjusted means of selected skill performance of male volleyball players between experimental and control groups.

Table-3
Scheffe's Post-Hoc Test for the Skill Performance of Male Volleyball Players

Sl. No	Variables	Means			Mean Difference	CI
		LIPTG	HIPTG	CG		
1	Over head pass	27.86	27.60	---	0.26	1.21
		27.86	---	22.66	5.20*	
		---	27.60	22.66	4.94*	
2	Fore hand pass	27.20	27.40	---	0.20	1.25
		27.20	---	22.86	4.34*	
		---	27.40	22.86	4.54*	

From the table III it can be seen that the mean differences between low intensity plyometric training and control group, high intensity plyometric training control group of over head pass (5.20, 4.94) and fore hand pass (4.34, 4.54) respectively, greater than the confidential interval value (1.21, 1.25) respectively, which was significant at 0.05 level of confidence. The mean differences between low intensity plyometric training and high intensity plyometric training of over head pass (0.26) and fore hand pass (0.20) respectively, lesser than the confidential interval value (1.21, 1.25) which was insignificant at 0.05 level of confidence.

The graphical representation of data has been presented in figure No. 1 to 2.

Figure: 1
Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to Over Head Pass

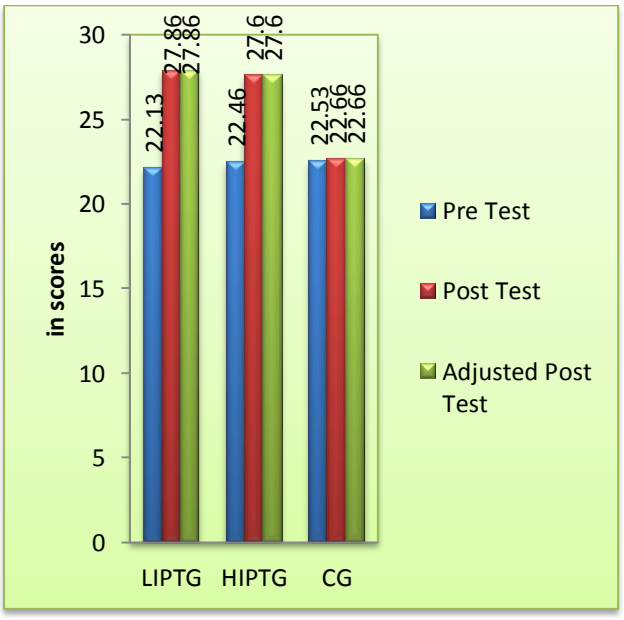
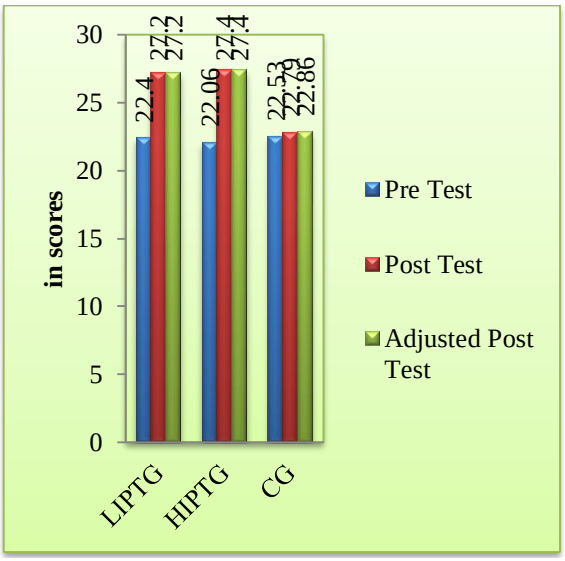


Figure: 2
Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to Fore Hand Pass



In case of skill performance variables i.e. over head pass and fore hand pass, the results between pre and post (6 weeks) test has been found significantly higher in experimental group in comparison to control group. The findings of the present study have strongly indicates that six weeks of experimental groups have significant effect on selected skill performance variables i.e., over head pass and fore hand pass of volleyball players. Hence the hypothesis earlier set that experimental groups would have been significant effect on selected skill performance variables than the control group in light of the same the hypothesis was accepted.

5.Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn: Significant effect of both low and high intensity plyometric training was found on over head pass and fore hand pass among volleyball players.

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