

Effect of eight weeks suspension belt training program on coordinative ability and skill performance among intercollegiate volleyball players of Nashik

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Abstract

Coordination is the fine motor control activities needed for any ball games in sports. Coordination, an ability to incorporate each motor frame works along fluctuating tactile mode into productive developments. The main objective of the study was to find out the improvement of coordinative ability and skill performance of volleyball players through skill related training. For this study, 20 intercollegiate level volleyball players and they were selected from KGDM, Arts, Commerce and Science College Niphad, Nashik. has taken as samples, the group-I as a control group and group-II as training group, each group consists of 10 players of age 18-25 years. The experimental group undergone 08 weeks of training on 4 days in a week, the control group did not taken part of suspension belt training for the eight weeks of duration. The coordinative ability variables chosen for this study are Reaction Ability the skill related variables chosen for this investigation are Spiking/Attacking. The data were taken prior to the training period and the post data were taken after the 08 weeks of suspension training. The Paired 't' test was executed to find out the significant mean variation between before and after test of training and control group and the percentile was calculated to find out the improvement differentiation between pre and post data. The Significant difference of 'adjusted post-test mean' between the experimental and control group was analyzed by analysis of covariance (ANCOVA). The 0.05 level of confidences was fixed as the level of significance. The results found out that overall coordinating abilities and skill performance are significantly improved in the training group when compared with the control group after 08 weeks of suspension training.

Keywords: Coordinative ability, skill related training, reaction ability, attacking, suspension training

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Introduction

Volleyball was called Mintonette as a result of its similitude with badminton. Later, Alfred Halstead renamed as volleyball the fact that the aim of the game was to volley the ball back over a net. The advanced volleyball is profoundly spent significant time in practically all the significant aptitudes of volleyball. Volleyball is a group action were playing between two teams consists of 6 players in each and the net is at the center disconnected the teams. The score are endeavors by the ball correctly dropped in the opponent court sifted through standard rules.

Spiking

The spiking is the spectacular movement in volleyball. The third passer usually hit the ball with highest possible force to the target to finish the point. The hitter must shoot the ball above the net without touching the net, it is called the "spike" or "kill" shot. The spikier usually hit the ball Coordinative Abilities.

Coordination, an ability to incorporate each motor frame works along fluctuating tactile mode into productive developments.

The amicable cooperating of the synchrony, mood of one's developments is essential to facilitated development. Different body parts might be included, for example, hand eye coordination, ball kick or strolling stairs. Hand eye coordination is apparent in adequate motor quality for example, Stringing, Modeling clay or in total motor activities for example, ball catching, attacking volleyball (Budde, *et al.*, 2005) [7].

Reaction ability

Reaction ability is to respond rapidly and efficiently to a signal. To a great extent it depends on sense organs, coordinative processes of CNS (central nervous system), decision making, concentration and anticipation.

Methods and Materials

In this research study used the experimental group design. the achieving the goal of this investigation the coordinative ability and skill performance of volleyball players' twenty male players from KGDM, Arts, Commerce and Science College Niphad, Nashik were selected as the participants and they were

between 18-25 years. Dependent Variables coordinative ability and skill performance of volleyball as well as independent variable is suspension belt training program. The static group comparison design was used for the study. Two groups were made as Experimental and control Group each comprising of 10 subjects. Criterion measures Coordinative Ability Variable in that Reaction Ability measured by Ball Reaction Exercise Test and Spiking/Attacking Brady Volleyball Test is used. The data were collected from KGDM, Arts, Commerce and Science

College Niphad, Nashik during the college working days with the permission from the head of institution. All the data were collected at the morning hours. The data were taken prior to the training period and the post data were taken after the 08 weeks of skill related training. The Significant difference of adjusted posttest means between the experimental and control group was analyzed by analysis of covariance (ANCOVA). The 0.05 level of confidences was fixed as the level of significance.

Table 1: Training Program

Day/Session	Exercise	Sets/Reps/Duration	Target Muscle Group
Warm-up	Dynamic arm circles, air squats and light jumping jacks	5 minutes	Full Body
Exercise 1	TRX / Suspension Squats	3 sets x 15 reps	Quads, Glutes
Exercise 2	TRX Chest Press (Push-Up angle)	3 sets x 12-15 reps	Chest, Triceps and Core
Exercise 3	TRX Low Row	3 sets x 12-15 reps	Back, Biceps, Rear Delts
Exercise 4	TRX Hamstring Curls	3 sets x 12-15 reps	Hamstring, Glutes
Exercise 5	TRX Biceps Curls	3 sets x 12 reps	Biceps
Exercise 6	TRX Plank/ Atomic Pike	3 sets X 30-40 reps	Core, Abs

Analysis and Interpretation of the Data

To compare the selected coordinative abilities and skill

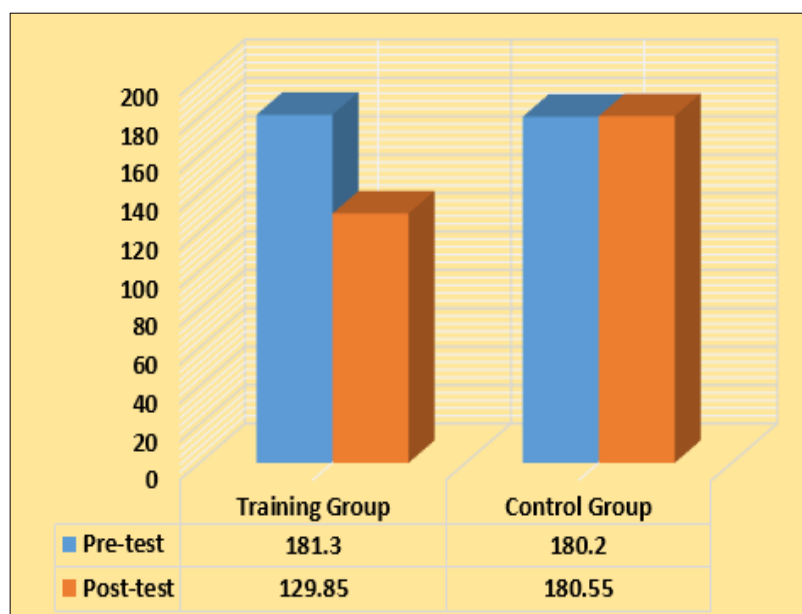
performance among the groups, analysis of covariance (ANCOVA) was used at ($p>0.05$).

Table 2: Calculation of adjusted post-test mean of reaction ability of the training and control groups (score in seconds)

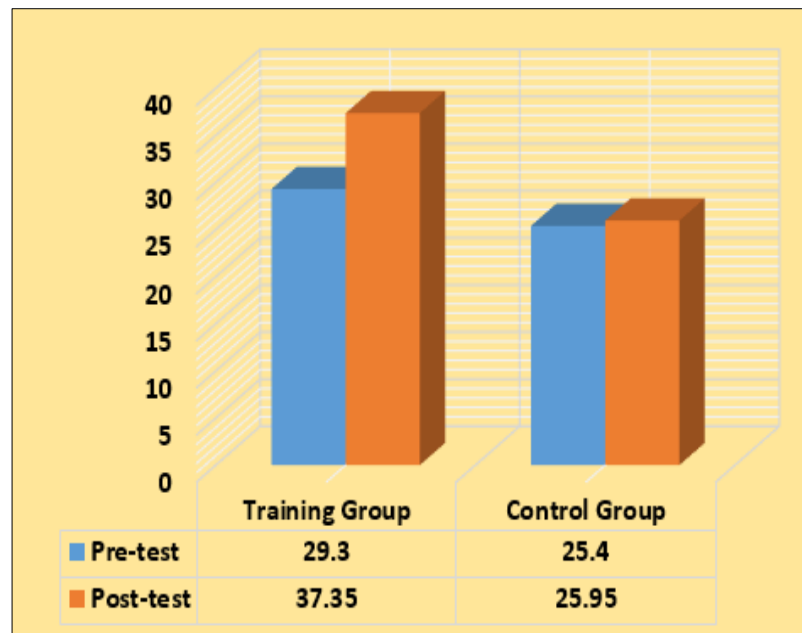
Test	Training Group	Control Group	SOV	SS	DF	MS	'F' Ratio	Sig.
Pre-test (M)	181.30	180.20	B	12.10	1	12.10	0.007	0.936
SD	45.21	39.15	W	7.379.30	18	1851.82		
Post-test (M)	129.85	180.55	B	25704.90	1	25704.90	23.54	0.001
SD	20.47	38.02	W	35429.50	18	932.34		
Adjusted Post-test (M)	129.85	180.85	B	26358.64	1	26358.64	86.42	0.001
SD			W	11228.31	18	303.46		

Table 3: Calculation of adjusted post-test mean of attacking skill bradly volleyball test of training and control groups (score in seconds)

Test	Training Group	Control Group	SOV	SS	DF	MS	'F' Ratio	Sig.
Pre-test (M)	29.300	25.400	B	144.400	1	144.400	2.14	0.151
SD	9.570	6.45	W	2553.20	18	66.188		
Post-test (M)	37.350	25.950	B	1299.600	1	1299.600	16.163	0.000
SD	11.263	5.826	W	3055.500	18	80.408		
Adjusted Post-test (M)	35.430	27.870	B	541.662	1	541.662	44.701	0.000
SD			W	447.612	18	12.098		



Graph 1: Reaction Ability



Graph 2: Attacking

Conclusion

- The result between pretest and posttest differentiation of the training group had a more significant improvement in coordinative ability such as reaction ability.
- The result between the pretest and posttest of the training group had a more significant improvement in all skill performance, such as attacking ability.

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