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Influence of Varied Combinations of Complex Training on Explosive Power of School Volleyball Players

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Abstract:

The purpose of this study was to find out the influence of varied combinations of complex training on the explosive power of school volleyball players. To achieve these purpose 60 school volleyball players with an age group of 14-17 years were selected from boys Higher Secondary School, Coimbatore as subjects. They were randomly divided in to four equal groups of 15 subjects each and assigned to experimental group-I, experimental group-II, and experimental group – III and control group. The Experimental group:-I (n=15, RTPT group) performed resistance training followed by plyometric training, Experimental group:-II (n=15; PTET group) performed plyometric training followed endurance training the Experimental group:-III (n=15; RTET group) performed resistance training followed by endurance training (n=15; control group) did not practice any specific training. The training period was 12 weeks. All the subjects underwent test namely vertical jump. They were assessed before and after the training period of twelve weeks. The 't' ratio was used to find out the significant pre and post mean difference between the groups to analysis the data. The study revealed that the above said variables were significantly improved due to the influence of resistance training followed by plyometrics training.

1. Introduction

Volleyball is a dynamic and fast-paced game. The purpose of complex training for volleyball players is not to build big muscles, but to develop the physical attributes necessary to improve a player's performance. To play volleyball, one has to be good at vertical jump, known as explosive power. A volleyball match can be played for five sets which means a match can last for about 90 minutes, during which a player can perform 250 -300 actions dominated by the explosive type of strength of the leg muscles. The total number of actions as jumps takes up around 50-60% high speed movements and change of direction in space about 30% and as falls about 15%. The spike and block actions are dominated by the corresponding explosive type of strength which is referred to as a player's vertical jump which is usually the key to winning point (Stojanovic, Radmila Kostic 2004)

2. Methodology

To achieve the purpose of the study, sixty healthy district level volleyball players were selected as subjects from Dindigul. The age of the subjects was ranged between 14 to 17 years. All of the subjects had successfully passed a physical exam in which they were screened for any possible injury or illness. The subjects received all the necessary information about the study's procedures in oral and written forms. Each subject completed a medical history form, a training background questionnaire, and a written informed consent form. All the subjects were accepted and voluntarily participated in this study. The study was formulated as pre and post test random group design, in which sixty subjects were divided into four equal groups. The Experimental group:-I (n=15, RTPT group) performed resistance training followed by plyometric training, Experimental group:-II (n=15; PTET group) performed plyometric training followed by endurance training the Experimental group:-III (n=15; RTET group) performed resistance training followed by endurance training (n=15; control group) did not practise any specific training. The training period was 12 weeks. In the present study, the data was analyzed in two parts: 1) Training effects of each group on performance variables and skill performance in order to analyze the treatment effect of training "t" ratio was used.

- The table 1 showing the mean values of RTET on explosive power

Test	Mean	S.D	M.D	't' ratio
Pre-Test	35.32	2.73	14.78	6.89 *
Post -Test	50.10	6.47		

Table 1
Table Value (2.14)

- The table 2 showing the mean values of PTET on explosive power

Test	Mean	S.D	M.D	't' ratio
Pre-Test	35.69	4.49	9.53	5.48 *
Post - Test	45.22	4.21		

Table 2
Table Value (2.14)

- The table 3 showing the mean values of RTET on explosive power

Test	Mean	S.D	M.D	't' ratio
Pre-Test	35.00	4.41	5.01	3.31 *
Post -Test	40.02	3.99		

Table 3
Table Value (2.14)

- The table 4 showing the mean values of control Group on explosive power

Test	Mean	S.D	M.D	't' ratio
Pre-Test	35.10	6.14	0,03	0.013
Post -Test	35.07	4.10		

Table 4
Table Value (2.14)

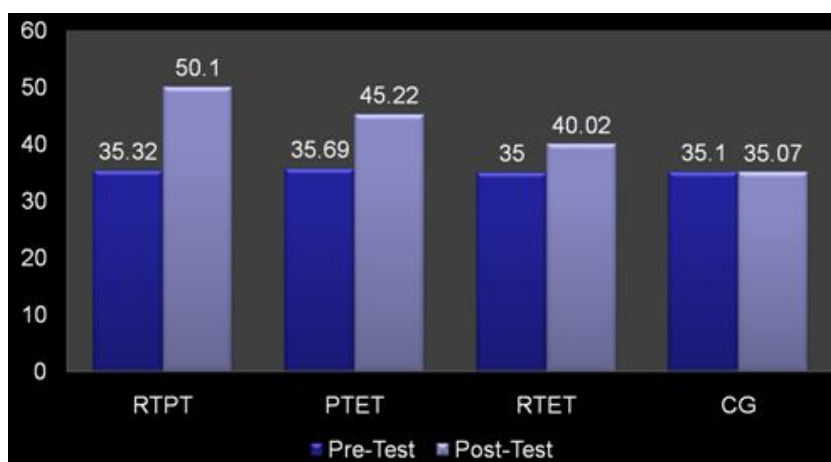


Figure 1: The Bar diagram showing the mean values RTPT, PTET, RTET and CG on Explosive Power

3. Result of the Study

- In the present study the resistance training followed by plyometric training showed the significant improvement on explosive power.
- In the present study the plyometric training followed by endurance training showed the significant improvement on explosive power.
- In the present study the resistance training followed by endurance training showed the significant improvement on explosive power.
- In the present study the control group did not show any significant improvement on explosive power.
- In the present study resistance training followed by plyometric training improved better than the plyometric training followed by endurance training and resistance training followed by endurance training and control group

4. Conclusion

- In the present study resistance training followed by plyometric training improved better then the plyometric training followed by endurance training and resistance training followed by endurance training and control group

5. References

- David H. Clarke and H. Harrison Clarke, (1970) Advanced Processes in Physical Education Recreation and Health, Englewood Cliffs, N.J. Prentice Hall. Inc.
- Bames, et al., (2007), "Relationship of jumping and agility performance in female volleyball athletes." J Strength Cond Res. Nov;21(4):1192-6
- Gerard Taylor (2005)Capoeira Conditioning: How to Build Strength, Agility, and Cardiovascular FitnessUsing Capoeira Movements
- Helgerud, O.J. Kemi, J. Hoff, Pre-session concurrent strength and endurance development in elite soccer player, 2003, 55.
- C. Kotzamanidis, D. Chatzopoulos, C. Michalidis, J. Strength. Con. Res., 2005, 19: 369