

FULL LENGTH ARTICLE

Effect of specific drill training programme on playing ability among volleyball players

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ABSTRACT: The purpose of the study was to find out the effect of specific drill training programme on playing ability among volleyball players. To achieve the purpose of the study, thirty higher secondary school male volleyball players from Thanthai Periyar Govt Higher Secondary School, Karaikal Pondicherry were selected as subjects. The age of the subjects was ranged from 16-17 years. They were divided into two equal groups. Each group consists of 15 subjects. Group-I was undergoing to specific volleyball fitness training for five days in a week for twelve weeks, Group -II acted as a control group (CG). They didn't undergo for any specific training programme than the normal routine volleyball game. The playing ability was selected as the dependent variable and they were assessed by judges ratings. The data was collected before and after 12 weeks of training. The data was analysed by using analysis of covariance (ANCOVA). The level of significance was fixed at 0.05. The findings of the present study have strongly indicated that volleyball specific drill training group have a significant effect on playing ability of high school male volleyball players.

Keywords: Specific Drill Exercise and playing ability

1 Introduction

Volleyball involves frequent bouts of intense activities such as jumping, diving, and lateral movement, and these activities are coupled with short rest periods throughout a match duration that is typically 60-120 minutes. Volleyball is a complex game of simple skills. Two teams in the match, as opponents, will exercise various skills and tactics to attack and to defend. The front row players' task is to attack and "spike" the ball, or "block" a ball, to prevent the ball crossing the net. In a match, every player should change their position in turn except the libero, which means every player on the court should be able to serve, set, pass, spike, and block. Volleyball is a sport of constant motion. The basic pattern of movement in making an attack includes a dig (an underarm pass made with the forearms), a set (an overhead pass made with the hands), and a spike (the overhead attacking shot). Teams can also try to block the opponent's spike as the ball crosses the net. So it is essential for the players to possess physical fitness, physique and physiological parameters that allow them to play their roles most effectively. The sport

specific technical skills in sports are predominant factors. The physical fitness of a player, however, can be a decisive determinant of success during competition. Chin et al (1996) recommend that if a player wants to achieve reasonable success in competitions at a higher level, improvements in physical fitness needs to be emphasized in addition to skill training [1].

Scientific training methods and application of basic principles of body mechanics in sports skill have been attributed to the higher level of performance in sports skills. Any physical activity leads to anatomical, physiological, bio-chemical and psychological changes. The efficiency of a physical activity results from its duration, distance, and repetitions (volume) load and velocity (intensity) and the frequency of performance (density). Sport specific training is simply fitness and performance training designed specifically for athletic performance enhancement. Training programs for athletic performance enhancement could include such areas as strength, speed, power, endurance, flexibility, mobility, agility, mental preparedness (including goal setting), sleep, recovery/regeneration techniques and

strategies, nutrition, rehabilitation, pre-habilitation, and injury risk reduction. Skill-based conditioning drills follow work to rest ratios similar to the competition, incorporate rapid starts, stops and change of direction close to game speed, and also include technical skills (serving, spiking, blocking, passing, etc). Mohr (2003) evaluated training-induced injuries over one season revealed that 37.5% of injuries sustained occurred during traditional conditioning protocols (linear runs with the involvement of technical skills), compared to 10.7% that were sustained during skill-based conditioning drills. Over 50% percent of the injuries that resulted in time lost from competition occurred during traditional conditioning protocols. Game-based training has been reported to offer a safe, effective method of conditioning for team-sport athletes that results in comparable (and, in some cases, greater) improvements in physical fitness and performance than traditional conditioning activities [2].

There are different types of training methods for the development of performance abilities of volleyball players. Understanding these training methods and the effectiveness of the training methods to suit a particular game and game situations is a challenging task for any coach or player. This helps coaches and athletes to prevent injury and overtraining while trying to maximize their performance variables, and analyze the strengths and weaknesses related to their specific training programs. Skill based conditioning is a widely used approach for structuring a training programme to improve competitive performance in a specific sport by training in a variety of sports. The principles of specificity of training tend to have greater significance, especially for basic level volleyball. For the volleyball players, skill based training may be highly beneficial in terms of overall fitness. Similarly, skill based training may be an appropriate training to prevent physical injury and it should be very specific, also avoiding the mental fatigue compare to traditional training which is common to the fitness. The Scientific method of training and coaching is one of the key areas, which all the successful teams have concentrated and maintained for great results. Even though there are numerous methods of training available, the role of skill based training in developing skill performance and physical fitness components is undisputed. Recent studies have supported the theory that specific training, when executed for the appropriate duration at the appropriate intensity, meets the criteria for developing the performance of football,

rugby etc. But less information is available on this area of research in volleyball.

2 Methodology

The purpose of the study was to find out the effect of specific drill training programme on playing ability among volleyball players. To achieve the purpose of the study thirty higher secondary school male volleyball players from Thanthai Periyar Higher Secondary School, Karaikal Pondicherry were selected as subjects. The age of the subjects was ranged from 16-17 years. They were divided into two equal groups. Each group consists of 15 subjects. Group-I was undergoing to volleyball specific drill training for five days in a week for twelve weeks, Group –II acted as a control group (CG). They didn't undergo for any specific training programme. The playing ability was selected as the dependent variable and they were assessed by were assessed by judges ratings.

3 Training procedures

After the initial measurement, the specially designed training programme named as volleyball specific training programme was to give to the subjects of the experimental group. Each experimental session was of 45 minutes duration with including warm up and warm down for five days in a week for 12 weeks in the morning sessions only. The package of volleyball specific drill training were as follows: set with sideways walk, set to box, blocker movement setting drill, setter concentration drill, blind blocking drill, middle blocking drill, jousting blocking drill, side-to-side blocking drill, middle attack drill, block and hit drill, hitter versus hitter, six-on-six drill, court drills passing with partners by jogging in between, bump pass, make a turn and pass, pass to self, do a forward roll, pass to self again, then bump to a partner, passing the ball with moving in a circle, pass- moving to left and pass, then move to the right then pass, outside in hitting, four way step close, multiple areas deep hitting, power and vision hitting, make a pass to the setter and attack the ball, continuous attack in all the three positions etc.

4 Statistical procedures

The results of the study showed that there was The data pertaining to the variables in this study were examined by using dependent „t“ test to find out significant improvement and analysis of covariance (ANCOVA) for each variable separately in order to determine the difference and tested at 0.05 level of significance.

5 Analysis of the data

The dependent, „t“ test on data obtained for playing ability of the pre and post-test means of

experimental groups have been analysed and presented in Table I

Table-I
Mean and Dependent „t“ test of experimental groups and control group on selected variables

Variables	Mean	Specific drill training group	Control group
Playing ability	Pre test mean	46.66	46.73
	Post test mean	72.20	46.26
	„t“ test	20.19*	0.923

*significant at 0.05 level confidence (14) =2.14

The analysis of covariance (ANCOVA) on data obtained for playing ability of the experimental and

control group have been analysed and it is presented in table-II

Table-II
Analysis of covariance of experimental groups and control groups

Variables	Adjusted post test means		Source of variance	SS	df	Mean square	‘F’-ratio
	Specific drill	Control group					
Playing ability	72.20	46.26	Between	5057.39	1	5057.39	633.89*
			Within	215.41	27	7.97	

*significant at 0.05 level of confidence, df (1, 27) =4.21

6 Discussions

Specificity is a method of training in a specific way to create a specific outcome. In many team sports, specificity may even be determined by player position. The results of the present study showed that there was a significant difference between playing ability to twelve weeks of specific drill training. However, the control group did not show any improvement on playing ability. The results of the study thoroughly support the results of the previous research of specific drill training on different disciplines and it is justified as follows, Skill-based conditioning games is likely to result in the greatest improvements in fitness and skill in junior elite volleyball players [3]. Gabbett and colleagues (2006) found that skill-based training improves spiking, setting, and passing accuracy but has little effect on the physiological and anthropometric characteristics of players [4]. Hakkinen (1996), that 4-5 weekly sessions of specific playing drills and competitive games of volleyball players significantly improved spiking and blocking skills [5].

improvement due to the package of specific volleyball drill training programme.

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7 Conclusions

Based on the results of the study, it was concluded that playing ability showed significant