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Effect of specific skill training with pilates training on skill performance variables of school level volleyball players

Dimitrios

Abstract
The study was to find out the effect of Specific Skill training with Pilate's training on Skill performance variables of school level volleyball players. To achieve the purpose of this study, thirty players were randomly selected from Sri Ramakrishna Matriculation Higher Secondary School, Coimbatore and their ages were ranged between 13 and 17 years. All the subjects were divided in to two groups with 15 subjects each as experimental (Group-I) and control group (Group-II). Group-I underwent specific skill training with Pilates training for a period of eight weeks and group-II acted as control who did not participate in any special training other than the routine. The data were collected before and after the training period of 12 weeks and the data collected were statically analysed by't' test, which was used to find out the significant improvement on selected parameters if any among the post-test means of experimental and control group on each parameters separately. The result shows that there was a significant improvement in the Serving ability and Spiking ability.

Keywords: Specific skill training, Pilates training, serving ability, spiking ability.

Introduction

Sport Specific Training

Sport Specific Training introduces & refines the necessary skills to excel at any sport. Your young athlete will feel more confident in their agility, speed, & hand/eye coordination. Group or individual training is available. Strength training is an essential element of fitness for every sport. Resistance exercises only add unnecessary bulk to athletes and hinders their ability to execute skill and perform that their best. Strength training and conditioning is an integral part of athletic performance. Performance in endurance events can be improved with a well-structured strength routine.

Sport specific resistance training requires a refined approach. It is far more complex than simply lifting heavy weights to complete exhaustion. Most athletes require explosive power, muscular endurance, maximal strength or any combination of the three in order to excel. Pure muscle bulk is rarely the primary concern.

Volleyball is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules. It has been a part of the official program of the Summer Olympic Games since 1964. The complete rules are extensive. But simply, play proceeds as follows: a player on one of the teams begins a 'rally' by serving the ball (tossing or releasing it and then hitting it with a hand or arm), from behind the back boundary line of the court, over the net, and into the receiving team's court. The receiving team must not let the ball be grounded within their court. The team may touch the ball up to 3 times but individual players may not touch the ball twice consecutively. Typically, the first two touches are used to set up for an attack, an attempt to direct the ball back over the net in such a way that the serving team is unable to prevent it from being grounded in their court. The rally continues, with each team allowed as many as three consecutive touches, until either (1): a team makes a kill, grounding the ball on the opponent's court and winning the rally; or (2): a team commits a fault and loses the rally. The team that wins the rally is awarded a point, and serves the ball to start the next rally.

Pilates is a physical fitness system developed in the early 20th century by Joseph Pilates. It is

Practiced worldwide, and especially in western countries such as Canada, the United States and the United Kingdom. Pilates was developed by Joseph Pilates, a physical culturist from monchengladbach, Germany. His father was a prize-winning gymnast and his mother a naturopath. He studied both Eastern and Western forms of exercise including yoga. During the first half of the twentieth century, he developed a system of exercises which were intended to strengthen the human mind and body. Pilates believed that mental and physical healths were interrelated. In his youth he had practiced many of the physical training regimes available in Germany, and it was from these he developed his own work.

Many a number of studies have looked at the benefits of Pilates-based exercises for low back pain, maintenance of functional capacity, and improvement of a person's quality of life only a few studies have evaluated the effectiveness of Pilates training on the physical fitness of athletes and volleyball players in a specific way. Several previous studies demonstrated that Pilates training promotes improvements in the physical fitness of young athletes the study by Cruz *et al*. is not in line with this literature.

Moreover, all these studies showed differences in manipulation of training variables (i.e., intensity and volume in particular), Pilates training methods (mat exercises vs. apparatus), and some studies with athletes did not use a control group. Unfortunately, the scientific understanding of this issue remains unclear and for this reason we designed a preliminary study to compare the effects of specific skill training with Pilates training on fitness variables of school level volleyball players. Order to collect the data from standing broad jump measure leg explosive power and shuttle (4×10m)run measure agility. These continuous data, representing the outcome variables, were used to compare the groups. The results of the comparative analysis were defined by statistically significant differences between the two groups (control group and experimental group).

Testing procedure

To evaluate skill performance variables, serving ability was measured by Russel Lange serving test, the unit of measurement was in points and Spiking ability was measured by Russel Lange serving test, the unit of measurement was in points. The parameters were measured at baseline and after eight weeks of specific skill training with Pilates training were examined.

Methods

The purpose of the study was to find out the effect of specific skill training with Pilates training on selected skill performance variables of school level volley ball players. Thirty school level volley ball players wererandomly selected and their age ranged between 13 and 17 years. They were divided into two equal groups of fifteen each. No attempts were made to equate the groups. Experimental group I (n = 15) underwent Specific skill training (SST) with Pilates training for a period of 12 weeks, and group II (n = 15) acted act as control group (CG), the subjects in control group were not be given any short of special training program other than their regular activity.

Design

To evaluate skill performance variables, serving ability was measured by Russel Lange serving test, the unit of measurement was in points and Spiking ability was measured by Russel Lange serving test, the unit of measurement was in points. The parameters were measured at base line and after eight weeks of specific skill training with Pilates training were examined.

Training program

The training program was conducted for 45 minutes for session in a day, 3 days in a week for a period of twelve weeks duration. These 45 minutes included 10 minutes warm up, specific skill training with Pilates training practices for 25 minutes and 10 minutes warm down. Every two weeks of training 5% of intensity of load was increased from 65% to 80% of work load. The volume of training prescribed based on the number of sets and repetitions. The equivalent in specific skill training with Pilates training is the length of the time each action in total 3 day per weeks (Monday, Wednesday and Friday).

Statistical analysis

The collected data before and after training period of 8 weeks on the above said variables due to the effect of specific skill training with Pilate training were statistically analysed with 't' test to find out the significant improvement between pre and post-test. In all cases the criterion for statistical significance was set at 0.05 level of confidence. (P<0.05)

Results

Table 1: Computation of 'T' Ratio on selected skill performance variables of school level volley ball players on Experimental Group and Control Group

Group	Variables		Mean	N	Std. Deviation	Std. Error Mean	t ratio
Experimental Group	Serving Ability	Pre	13.95	15	0.99	1.23	11.92*
		Post	15.00	15	0.97		
	Spiking Ability	Pre	10.28	15	0.75	1.24	15.98*
		Post	10.31	15	0.81		
Control group	Serving Ability	Pre	13.70	15	1.13	0.50	1.00
		Post	13.65	15	1.22		
	Spiking Ability	Pre	14.10	15	0.78	0.82	1.83
		Post	13.95	15	0.94		

*Significant level 0.05 level degree of freedom (2.14, 1 and 14)

Table I reveals the computation of mean, standard deviation and't' ratio on selected skill performance variables namely serving ability and spiking ability of experimental group. The obtained't' ratio of serving ability were 11.92* and spiking ability were 15.98*respectively. The required table value was 2.14 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained't' values were greater than the table value it was found to be statistically significant. Further the computation of mean, standard deviation and't' ratio on selected skill performance variables namely serving ability and spiking ability of control group. The obtained't'ratio on serving ability and spiking ability were

1.00 and 1.83 respectively. The required table value was 2.14 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained't' values were lesser than the table value it was found to be statistically not significant.

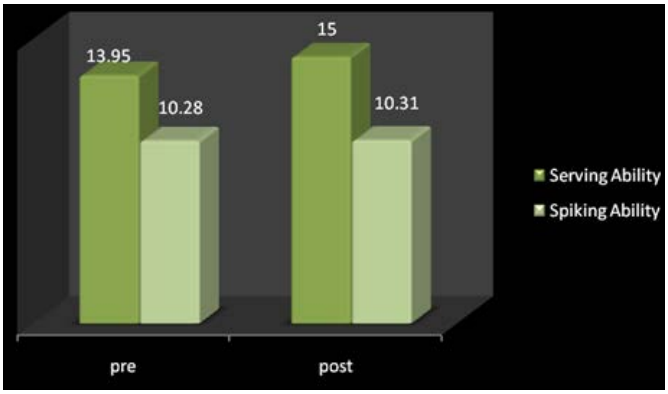

Fig 1: Bar Diagram Showing serving ability and spiking ability of Volleyball Player on experimental group

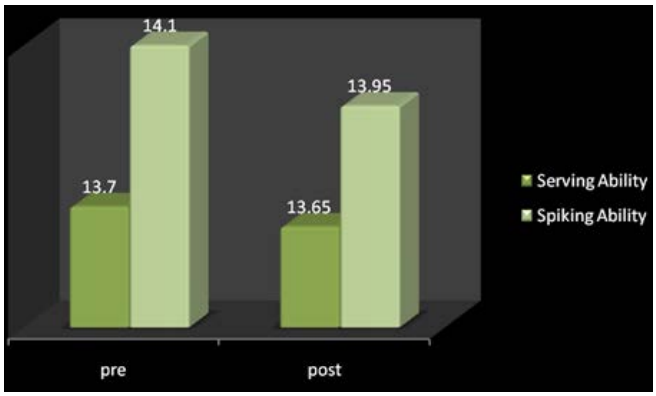

Fig 2: Bar Diagram Showing serving ability and spiking ability of Volleyball Player on control group

Discussion and findings

The present study experiment the effect of specific skill training with Pilate training on skill performance variables of school level volley ball players. The result of the study indicated that the specific skill training with Pilate training improved the skill performance variables such as serving ability and spiking ability. The findings of the present study had similarity with the findings of the investigations referred in this study. Shaik Meeravali -2015 [1] investigated the effect of specific skill training on skill performance variables such as serving ability and spiking ability of school level kho-kho players. He concluded that there was a significant improvement on speed of school level kho-kho players due to the effect of specific training. Preeti-2019 [2] reported that there was a significant improvement takes place on agility of state level badminton players due to Pilate training. Sandipkumar Parekh-(2014) [3] reported that there was a significant improvement takes place on agility of volleyball players due to Pilate training. However, there was a significantly changes of subjects in the present study that the agility and leg explosive power were significantly improved in the group may be due to the specific skill training with Pilates training.

Conclusion

1. There was a significant improvement takes place on selected fitness variables due to the effect of eight weeks specific skill training with Pilates training.
2. There was a significant difference exists between experimental and control groups on selected fitness variables such as agility and leg explosive power.

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