



CONSEQUENCE OF KETTLEBELL INTERVENTION ON CORE STRENGTH AND MUSCULAR STRENGTH AMONG FEMALE VOLLEYBALL PLAYERS

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Abstract

The perseverance of the revision was to find out the consequence of kettlebell intervention of core strength and muscular strength among female volleyball players. For this revision 30 female volleyball players between the ages of 17 and 25 from the Chennai region of Tamil Nadu, India. They are divided into two groups. That is, bundle A is the kettlebell bundle and bundle B is the control bundle, each group being her 15 subjects. The kettlebell group received the log of her 8-week workout. Core strength was measured by plank, muscle endurance measured in the push-up test. Collect data from the subject to check performance before the training protocol and after her 8 weeks. After the collection of the data should be analysed by IBM (SPSS Version 26.0) statistical technique anova. Consequences showed significant improvements in core strength and muscle endurance in female volleyball players due to the 8 weeks kettlebell training.

Keywords: kettlebell training, core strength, muscle endurance, female volleyball players.

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Introduction

Volleyball is currently one of the most cutting-edge, physically demanding, and high-intensity sports in the world. High performance teams for volleyball can produce substantial growth in a player's explosiveness, particularly in their capacity to jump higher and faster. Exercises that call for maximum force in brief time periods are a part of volleyball-specific training, and they increase an athlete's explosive power. Serving, receiving, setting, spiking, blocking, digging passing, and placing the ball, together with spiking or attacking actions, are the sport's distinctive motions.

In volleyball, the primary metabolic demand is from the phosphates energy pathway, making it an anaerobic activity. A rapid rearward arm swing is combined with a maximum vertical jump to prepare for a follow-up strike. The majority of their practice and skill development as volleyball players involves high-intensity jumping. Therefore, particular care should be taken to make the addition of jump as effective for these athletes as possible. To exercise more strenuously while using cutting-edge tools and training regimes.

Strength and conditioning workouts are beneficial for improving daily living skills in leisure exercisers. Improvements in power, strength and other performance indices are elicited by powerlifting exercises both individually and in combination, and these improvements have been shown to be directly related to training adaptations. The kettlebell is an alternate training technique that will be researched and used to enhance performance and function. A kettlebell is a cast-iron weight with a handle that resembles a cannonball and is frequently used to improve strength, power, and general conditioning. The design of a kettle bell enables its centre of mass to go beyond the hand. Swings, raises, and presses

using a kettlebell are performed unilaterally and bilaterally in all planes.

Methodology

The study randomly selected 30 female volleyball players between the ages of 17 and 25 from the Chennai region of Tamil Nadu, India. They are divided into two groups. That is, bundle A is the kettlebell bundle and bundle B is the control bundle, each group being her 15 subjects. The kettlebell group received the log of her 8-week workout. Collect data from the subject to check performance before the training protocol and after her 8 weeks. Core strength was measured by plank, muscle endurance measured in the push-up test. The difference between the initial and final means of the reference variables was considered the effect of treatment on subjects.

Training protocol

The test group performed kettlebell exercises three times a week on Mondays, Wednesdays, and Fridays for eight weeks. The workout consisted of 10 minutes of warm-up and stretching, 40 minutes of selected kettlebell exercises, and a 15-minute cooldown. The initial intensity of the kettlebell exercise was set at 50-55%. I gradually increased the intensity of my kettlebell exercises each week. The intensity was set at 55%, 60% at 3 weeks and 65% at 4 weeks. Based on pilot studies, initial kettlebell intensity was set at 65-70%. Exercise intensity was gradually increased every two weeks. The intensity was set at 70% to 75% at week 6 and 80% at week 8.

Statistical technique

After the collection of the data should be analysed by IBM (SPSS Version 26.0) and the 2 groups were analysed by the statistical technique of ANOVA the confidence level is maintained at 0.05.

Table 1 Anova Of Experimental Bunches And Control Bunch On Core Strength And Muscular Endurance

Core Strength						
Tests	Kettlebell bunch	Control bunch	S.O.S	D.F	MS	F-Ratio
Pre-Test	1.21	1.25	0.03	1	0.03	1.36
			0.59	28	0.022	
Post-Test	1.93	1.24	2.47	1	2.47	61.75*
			1.24	28	0.04	
Muscular endurance						
Tests	Kettlebell bunch	Control bunch	S.O.S	D.F	MS	F-Ratio
Pre-Test	33.84	33.87	0.04	1	0.04	0.015
			73.57	28	2.62	
Post-Test	42.08	33.89	72.11	1	72.11	5.81*
			347.21	28	12.40	

*Significant at 0.05 level df 2, 27 table value 3.23

Pre-test F ratio values for core strength (1.36) and muscle endurance (0.015) according to the ANOVA shown in Table 1. The F-ratio values obtained are smaller than those in the table, indicating no significant difference between the experimental and control bundles with respect to core strength and muscle endurance in female volleyball players. Her F-ratio for core strength after testing is **61.75*** and muscle endurance is **5.81***. The obtained F-ratio values were found to be larger than those in the table. This indicates that there is a significant difference between experimental groups in terms of core strength and muscle endurance in female volleyball players.

Conclusion

Through applied statistical treatments, the researchers found that, after evaluation and analysis, the study participants' results showed significant improvements in core strength and muscle endurance in female volleyball players as a result of kettlebell training.

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