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Effect of core training on selected health related fitness variables among college football players

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Abstract---The College football players were studied in order to determine what effect core training has on certain physical variables. Twenty-three football players between the ages of 17 and 23 from the Chengalpattu district of Tamil Nadu, India were randomly selected for this study. Each group had fifteen participants. During the eight weeks that Gathering-1 underwent the core training, Gathering-2 acted as a control bunch, undergoing no additional training beyond their regular routine. Muscular strength and abdominal strength were the dependent variables. A sit-up test and a push-up test were used to test abdominal and muscular strength, respectively. The study used random group design pre- and post-tests. Following the training period of eight weeks, the collected data were statistically analyzed by ANOVA. Based on the results of the study on core training, college football players showed improvements in the physical variables.

Keywords---Core Training, Abdominal Strength, Muscular Strength, Football Players.

Introduction

Since the early 1980s, research on core strengths has been conducted. These processes have been shown to be beneficial for people with back pain who are carrying out everyday activities. There has been less research on the benefits of core training for elite athletes and how this training can be optimized to optimize sporting performance. Stabilizing muscles are developed and strengthened by performing specific exercises. Your abs are actively used throughout the day.

Stabilizing your core has a positive impact on athletic performance. You require the muscles in your midsection to keep you stable and supported in nearly every movement that you make, whether you're walking, reaching, balancing, getting up from a chair, or simply standing upright.

The center is made out of the lumbar spine, the muscles of the stomach divider, the back extensors, and the quadratus lumborum. Profoundly, connecting it to the pelvis, legs, shoulders and arms. The body's focal point of gravity is found and all the more significantly, from which all developments are started. Muscles are answerable for supporting stances, making movement, organizing muscle activities, taking into account dependability, engrossing power, producing power, and communicating powers all through the body. The center assumes such a huge part during movement, that it's a good idea to guarantee its solidarity and security. Profoundly. Center muscular build works uniquely in contrast to the appendage muscular structure in that center muscles frequently contract, solidifying the middle to such an extent that all muscles become synergists.

Methods

In this investigation, the subjects were taken from the Chengalpattu District, Tamil Nadu, India. 30 men football players are implemented in this study and their age range is between 17 to 23 years. They are divided into two groups namely, gathering -1 as the core training bunch and gathering- 2 as the control bunch. The gathering-1 was treated as an experimental bunch for 8 weeks. The training protocol was given in the morning section of alternate days of the week for 8 weeks. Before and after the training protocol of 8 weeks the data of subjects was collected for analysis of their performance.

The instructor gave the proper warming up before the training program and give all the explanations about the training and clarified the doubts. The core training exercises are Forearm Plank, Panther Shoulder Tap, Russian Twist, Butterfly Sit-Up, Dead Bug, Half-Kneeling Wood Chop, High Boat to Low Boat, Forearm Plank Rock, Body Saw, and Side Bend.

Tests and statistical data analysis

Information was dissected utilizing the SPSS Statistics (SPSS Statistics for Windows: IBM Corporation, adaptation 26.0) Means + SD were determined. Pre and post proportions of abdominal strength estimated utilizing (sit-ups) and muscular strength estimated utilizing (push-ups) were thought about utilizing Analysis of variance.

Results and Conclusions

Table 1

Analysis of variance in abdominal strength and muscular strength of xperimental and control group

Abdominal strength						
Tests	GP-1	GP-2	S.O.S	D.F	MS	F-Ratio
Pre-Test	35.46	36.33	5.63	1	5.63	1.56

			101.06	28	3.61	
Post-Test	39.73	34.73	187.50	1	187.50	35.99*
			145.86	28	5.21	
Muscular strength						
Tests	GP-1	GP-2	S.O.S	D.F	MS	F-Ratio
Pre-Test	12.93	12.80	0.13	1	0.13	0.90
			41.33	28	1.47	
Post-Test	15.66	12.86	58.00	1	58.80	31.02*
			53.06	28	1.89	

*Significant at 0.05 level table value 4.17 df 1.28

The pre-test averages and values of agility for the core training and control groups are 35.46 and 36.33, respectively, as shown in Table I. The F-ratios produced were 1.56, which were lower than the table value of 4.17 for df 1 and 28 that was necessary for significance at the 0.05 level of confidence.

Furthermore, the core training and control groups' post-test mean abdominal strength scores are 39.73 and 34.73, respectively. The F-ratios obtained are 35.99*, which are greater than the table value of 4.17 for df 1 and 28 necessary for significance at the 0.05 level of confidence.

The pre-test muscular strength means and values for the core training and control groups are 12.93 and 12.80, respectively. The F-ratios obtained were 0.90, which were lower than the table value of 4.17 for df 1 and 28 necessary for insignificance at the 0.05 level of confidence. Furthermore, the core training and control groups' post-test mean muscle strength values are 15.66 and 12.86, respectively. The F-ratios obtained are 31.02*, which is larger than the table value of 4.17 for df 1 and 28 necessary for significance at the 0.05 level of confidence.

Conclusion

This research suggests that core training improves the abdominal strength and muscular strength of the men football players due to the eight weeks of the training protocol.

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