



IMPACT OF CORE TRAINING ON SELECTED HEALTH RELATED PHYSICAL FITNESS VARIABLES AMONG COLLEGE MEN STUDENTS

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Abstract:

The purpose of the study was designed to examine the effect of core training on shoulder strength and strength endurance among college men students. For the study, thirty college men students from colleges in and around Salem, Tamil Nadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group 1 underwent core training for three days per week for twelve weeks. Group 2 acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables, namely shoulder strength and strength endurance were selected as criterion variables.

All the subjects of two groups were tested on selected dependent variables, namely shoulder strength and strength endurance by using pullups and bend knee sit-ups prior to and immediately after the training programme. The analysis of covariance was used to analyze the significant difference if any among the groups. The .05 level of confidence was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered appropriate. The results of the study showed that there was a significant difference between core training group and control group on shoulder strength and strength endurance. And also, it was found that there was a significant improvement on selected criterion variables such as shoulder strength and strength endurance due to core training.

Key Words: Core Training, Shoulder Strength, Strength Endurance, College Men Students

Introduction:

Core training, a cornerstone in the quest for a strong, balanced, and resilient body. Your core, consisting of muscles in the abdomen, lower back, pelvis, and hips, is more than just a sculpted six-pack; it's the powerhouse that supports your every move. Core training goes far beyond aesthetic goals, aiming to enhance stability, improve posture, and fortify the central hub of your body's strength. In this exploration of core training, we'll delve into exercises, techniques, and principles designed to build a robust and functional core. Whether you're an athlete striving for peak performance, a fitness enthusiast seeking improved overall strength, or someone simply looking to enhance everyday movements, core training is your key to unlocking a resilient foundation.

A strong core is the linchpin for efficient and effective movement, influencing everything from lifting heavy objects to maintaining balance during dynamic activities. As we navigate through various core exercises and routines, you'll discover that core training is not just about crunches; it's a holistic approach that engages multiple muscle groups, promoting coordination, stability, and flexibility.

Methodology:

The purpose of the study was designed to examine the effect of core training on shoulder strength and strength endurance among college men students. For the study, thirty college men students from colleges in and around Salem, Tamil Nadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group 1 underwent core training for three days per week for twelve weeks. Group 2 acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables, namely shoulder strength and strength endurance were selected as criterion variables.

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Analysis of the Data:

Shoulder Strength:

The analysis of covariance on shoulder strength of the pre and post test scores of core training group and control group have been analyzed and presented in table 1.

Table 1: Analysis of Covariance of the Data on Shoulder Strength of Pre and Post Tests Scores of Core Training and Control Groups

Test	Core Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	34.27	34.40	Between	0.13	1	0.13	0.06
S.D.	1.44	1.18	Within	58.53	28	2.09	
Post Test							
Mean	37.73	34.47	Between	80.03	1	80.03	17.97*
S.D.	1.36	1.26	Within	124.70	28	4.45	
Adjusted Post Test							
Mean	37.79	34.41	Between	85.20	1	85.20	354.02*
			Within	6.50	27	0.24	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

Table 1 shows that the adjusted post-test means of core training group and control group are 37.79 and 34.41 respectively. The obtained "F" ratio of 354.02 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on shoulder strength.

The results of the study indicated that there was a significant difference between the adjusted post-test means of core training group and control group on shoulder strength.

Strength Endurance:

The analysis of covariance on strength endurance of the pre and post test scores of core training group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Strength Endurance of Pre and Post Tests Scores of Core Training and Control Groups

Training and Control Groups							
Test	Core Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	41.13	40.20	Between	6.53	1	6.53	1.90
S.D.	1.89	1.91	Within	96.13	28	3.43	
Post Test							
Mean	46.07	40.47	Between	235.20	1	235.20	19.49*
S.D.	1.68	1.78	Within	337.87	28	12.07	
Adjusted Post Test							
Mean	45.64	40.89	Between	158.50	1	158.50	185.38*
			Within	23.09	27	0.86	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 2 and 28 and 2 and 27 are 3.34 and 3.35 respectively).

Table 2 shows that the adjusted post-test means of core training group and control group are 45.64 and 40.89 respectively. The obtained "F" ratio of 185.38 for adjusted post-test means is more than the table value of 3.35 for df 1 and 27 required for significance at .05 level of confidence on strength endurance.

The results of the study indicated that there was a significant difference between the adjusted post-test means of core training group and control group on strength endurance.

Conclusions:

- There was a significant difference between core training group and control group on shoulder strength and strength endurance.
- And also it was found that there was a significant improvement on selected criterion variables such as shoulder strength and strength endurance due to core training.

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