



EFFECT OF SAND BAG TRAINING ON SELECTED PHYSICAL FITNESS QUALITIES AMONG COLLEGE MEN STUDENTS

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Abstract:

The purpose of the study was designed to examine the effect of sand bag training on muscular endurance and cardio respiratory endurance among college men Students. For the purpose of the study, thirty college men Students from the RISE Krishna Sai Prakasam Group of Institutions, Ongole, Prakasam District, Andhra Pradesh State, India were selected as subjects. They were divided into two equal groups. Each group consisted of fifteen subjects. Group I underwent sand bag training for three days per week for twelve weeks. Group II acted as control who did not undergo any special training programme apart from their regular physical education programme. The following variables, namely muscular endurance and cardio respiratory endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables namely muscular endurance and cardio respiratory endurance by using bend knee sit-ups and cooper's 12 min run / walk test at 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 sand bag training group and control group on muscular endurance and cardio respiratory endurance. And also it was found that there was a significant improvement on selected criterion variables such as muscular endurance and cardio respiratory endurance due to sand bag training.

Key Words: Sand Bag Training, Muscular Endurance, Cardio Respiratory Endurance, College Men Students

Introduction:

Sandbag training can have significant effects on muscular endurance and flexibility due to its unique properties and the dynamic nature of the exercises involved. Sandbag training often involves functional movements that engage multiple muscle groups simultaneously. These movements require coordination, stability, and muscular endurance to perform effectively. Sandbags can create unstable loads, requiring greater stabilization from the muscles throughout the movement. This prolonged time under tension can help improve muscular endurance over time.

Sandbag training offers a wide range of exercises that target different muscle groups and movement patterns. This variety helps prevent muscle adaptation and plateaus, leading to improved endurance across various muscle groups. Many sandbag exercises involve dynamic movements that stretch and engage muscles through a full range of motion. This dynamic stretching can help improve flexibility by increasing joint mobility and muscle elasticity. Sandbag training often mimics real-life movements and activities, which can help improve functional flexibility. Functional flexibility refers to the ability to move with ease and control through various movements and positions encountered in daily life or sports.

Many sandbag exercises require core stabilization while performing dynamic movements. A strong and stable core is essential for maintaining proper posture and alignment during exercise, which contributes to overall flexibility and mobility. To maximize the benefits of sandbag training for muscular endurance and flexibility, it's important to incorporate a variety of exercises targeting different muscle groups and movement patterns. Additionally, proper form and technique are crucial to reduce the risk of injury and ensure effective training.

Methodology:

The purpose of the study was designed to examine the effect of sand bag training on muscular endurance and cardio respiratory endurance among college men Students. For the purpose of the study, thirty college men Students from the RISE Krishna Sai Prakasam Group of Institutions, Ongole, Prakasam District, Andhra Pradesh State, India were selected as subjects. They were divided into two equal groups. Each group consisted

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Analysis of the Data:

Muscular Endurance:

The analysis of covariance on muscular endurance of the pre and post test scores of sand bag training group and control group have been analyzed and presented in table 1.

Table 1: Analysis of Covariance of the Data on Muscular Endurance of Pre and Post Tests Scores of Sand Bag Training and Control Groups

Test	Sand Bag Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	36.53	36.80	Between	0.53	1	0.53	0.18
S.D.	1.71	2.43	Within	84.13	28	3.00	
Post Test							
Mean	44.80	36.93	Between	464.13	1	464.13	22.05*
S.D.	1.64	1.57	Within	589.47	28	21.05	
Adjusted Post Test							
Mean	44.92	36.81	Between	490.42	1	490.42	244.63*
			Within	54.13	27	2.00	

* 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).

The table 1 shows that the adjusted post-test means of sand bag training group and control group are 44.92 and 36.81 respectively. The obtained "F" ratio of 244.63 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 muscular endurance.

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

Cardio Respiratory Endurance:

The analysis of covariance on cardio respiratory endurance of the pre and post test scores of sand bag training group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Cardio Respiratory Endurance of Pre and Post Tests Scores of Sand Bag Training and Control Groups

Sand Bag Training and Control Groups							
Test	Sand Bag Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	1382.00	1370.00	Between	1080.00	1	1080.00	0.52
S.D.	43.85	33.51	Within	58640.00	28	2094.29	
Post Test							
Mean	1452.00	1379.33	Between	39603.33	1	39603.33	12.50*
S.D.	44.57	46.40	Within	88736.67	28	3169.17	
Adjusted Post Test							
Mean	1446.98	1384.35	Between	28887.96	1	28887.96	96.04*
			Within	8121.71	27	300.80	

* 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).

The table 2 shows that the adjusted post-test means of sand bag training group and control group are 1446.98 and 1384.35 respectively. The obtained "F" ratio of 96.04 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 cardio respiratory endurance.

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

Conclusions:

- There was a significant difference between sand bag training group and control group on muscular endurance and cardio respiratory endurance.
- And also it was found that there was a significant change on selected criterion variables such as muscular endurance and cardio respiratory endurance due to sand bag training.

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