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CONSEQUENCE OF FUNCTIONAL FITNESS TRAINING ON LEG STRENGTH AND STRENGTH ENDURANCE AMONG UNIVERSITY MEN STUDENTS

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Abstract:

The purpose of the study was designed to examine the effect of functional fitness training on leg strength and strength endurance of university menstudents. For the purpose of the study, thirty men students studying from various Departments in Annamalai University, Annamalai Nagar, Chidambaram, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent functional fitness 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 leg strength and strength endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using leg lift with dynamometer and bend knee sit-ups respectively 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 as an appropriate. The results of the study showed that there was a significant difference between functional fitness training group and control group on leg strength and strength endurance. And also it was found that there was a significant changeonleg strength and strength endurance due to twelve weeks of functional fitness training.

Key Words: Functional Fitness Training, Leg Strength, Strength Endurance, University Men Students

Introduction:

Functional fitness training is a dynamic and purpose-driven approach to exercise that goes beyond the traditional notions of isolated muscle workouts. This training methodology focuses on enhancing the body's ability to perform everyday activities with efficiency, strength, and flexibility. Unlike conventional fitness routines that may isolate specific muscle groups, functional fitness targets movements and patterns that mimic real-life tasks, promoting overall functional strength and mobility.

The essence of functional fitness lies in its emphasis on practical applicability. Whether it's lifting groceries, climbing stairs, or reaching for an object on a high shelf, functional fitness aims to improve the body's capability to handle various daily challenges. By incorporating multi-joint movements, balance exercises, and activities that engage multiple muscle groups simultaneously, functional fitness enhances coordination, stability, and overall physical functionality.

Functional fitness training is adaptable and scalable, making it suitable for individuals of all fitness levels and ages. Whether you are an athlete looking to improve sports performance, a busy professional striving for increased energy and productivity, or an older adult aiming to maintain independence, functional fitness offers a holistic approach to health and well-being.

Methodology:

The purpose of the study was designed to examine the effect of functional fitness training on leg strength and strength endurance of university menstudents. For the purpose of the study, thirty men students studying from various Departments in Annamalai University, Annamalai Nagar, Chidambaram, Tamilnadu, India were selected as subjects. They were divided into two equal groups. Each group consisted of the fifteen subjects. Group I underwent functional fitness 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 leg strength and strength endurance were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables by using leg lift with dynamometer and bend knee sit-ups respectively 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.

Analysis of the Data:

Leg Strength:

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

Table 1: Analysis of Covariance of the Data on Leg Strength of Pre and Post Tests Scores of Functional Fitness Training and Control Groups

Test	Functional Fitness Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	92.93	92.80	Between	0.13	1	0.13	0.10
S.D	1.06	1.11	Within	37.33	28	1.33	
Post Test							
Mean	94.80	93.07	Between	22.53	1	22.53	10.54*
S.D	1.17	1.12	Within	59.87	28	2.14	
Adjusted Post Test							
Mean	94.74	93.12	Between	19.59	1	19.59	53.40*
			Within	9.90	27	0.37	

* 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 functional fitness training group and control group are 94.74 and 93.12 respectively on leg strength. The obtained "F" ratio of 53.40 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 leg strength.

The results of the study indicated that there was a significant difference between the adjusted post-test means of functional fitness traininggroup and control group on leg strength.

Strength Endurance:

The analysis of covariance on strength endurance of the pre and post test scores of functional fitness 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 Functional Fitness Training and Control Groups

Test	Functional Fitness Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	41.33	40.33	Between	7.50	1	7.50	1.86
S.D.	1.96	1.80	Within	112.67	28	4.02	
Post Test							
Mean	46.20	40.60	Between	235.20	1	235.20	19.08*
S.D.	1.92	2.03	Within	345.20	28	12.33	
Adjusted Post Test							
Mean	45.77	41.03	Between	157.93	1	157.93	160.98*
			Within	26.49	27	0.98	

* 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 functional fitness training group and control group are 45.77 and 41.03 respectively on strength endurance. The obtained "F" ratio of 160.98 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 functional fitness traininggroup and control group onstrength endurance.

Conclusions:

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

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