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IMPACT OF SWISS BALL 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 swiss ball training on flexibility and elastic power 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 swiss ball 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 flexibility and elastic power were selected as criterion variables.

All the subjects of two groups were tested on selected dependent variables, namely flexibility and elastic power by using sit and reach test and bunny hops 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 swiss ball training group and control group on flexibility and elastic power. And also, it was found that there was a significant improvement on selected criterion variables such as flexibility and elastic power due to swiss ball training.

Key Words: Swiss Ball Training, Flexibility, Elastic Power, College Men Students

Introduction:

Swiss ball training, also known as stability ball or exercise ball training, introduces a dynamic and engaging dimension to fitness routines. The Swiss ball, a large inflatable ball, becomes a versatile piece of equipment that not only challenges the body's strength but also enhances balance and core stability. This form of exercise is characterized by its emphasis on engaging multiple muscle groups simultaneously, making it a fantastic addition to any fitness regimen.

In this exploration of Swiss ball training, we'll unravel the unique benefits and diverse exercises that this simple yet effective tool offers. Whether you're a fitness enthusiast looking to spice up your workouts or someone seeking a low-impact option for rehabilitation and core strengthening, the Swiss ball proves to be an adaptable and accessible choice.

The instability introduced by the Swiss ball requires the engagement of stabilizing muscles, promoting better posture and a stronger core. This not only contributes to improved athletic performance but also translates into enhanced functionality in everyday movements. From basic exercises to advanced movements, the Swiss ball provides a platform for a full-body workout that emphasizes both strength and flexibility.

Methodology:

The purpose of the study was designed to examine the effect of swiss ball training on flexibility and elastic power 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 swiss ball 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 flexibility and elastic power were selected as criterion variables. All the subjects of two groups were tested on selected dependent variables, namely flexibility and elastic power by using sit and reach test and bunny hops 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:

Flexibility:

The analysis of covariance on flexibility of the pre and post test scores of swiss ball training group and control group have been analyzed and presented in table 1.

Table 1: Analysis of Covariance of the Data on Flexibility of Pre and Post Tests Scores of Swiss Ball Training and Control Groups

Test	Swiss Ball Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	17.07	17.20	Between	0.13	1	0.13	0.05
S.D.	1.57	1.53	Within	73.33	28	2.62	
Post Test							
Mean	19.07	17.27	Between	24.30	1	24.30	6.79*
S.D.	1.56	1.65	Within	100.17	28	3.58	
Adjusted Post Test							
Mean	19.13	17.20	Between	27.87	1	27.87	109.56*
			Within	6.87	27	0.25	

* 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 swiss ball training group and control group are 19.13 and 17.20 respectively. The obtained "F" ratio of 109.56 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 flexibility.

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

Elastic Power:

The analysis of covariance on elastic power of the pre and post test scores of swiss ball training group and control group have been analyzed and presented in table 2.

Table 2: Analysis of Covariance of the Data on Elastic Power of Pre and Post Tests Scores of Swiss Ball Training and Control Groups

Test	Swiss Ball Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	4.85	4.88	Between	0.01	1	0.0051	1.13
S.D.	0.06	0.12	Within	0.13	28	0.0045	
Post Test							
Mean	5.19	4.91	Between	0.60	1	0.5964	18.89*
S.D.	0.07	0.07	Within	0.88	28	0.0316	
Adjusted Post Test							
Mean	5.20	4.90	Between	0.65	1	0.6470	75.94*
			Within	0.23	27	0.0085	

* 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 swiss ball training group and control group are 5.20 and 4.90 respectively. The obtained "F" ratio of 75.94 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 elastic power.

The results of the study indicated that there was a significant difference between the adjusted post-test means of swiss ball training group and control group on elastic power.

Conclusions:

- There was a significant difference between swiss ball training group and control group on flexibility and elastic power.
- And also it was found that there was a significant improvement on selected criterion variables such as flexibility and elastic power due to swiss ball training.

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