

Effect of Calisthenic Strength Training Exercise on Upper Body Strength of Senior Citizen

Mukesh Narwariya¹, Dr. Y. S. Rajpoot²

¹Assistant Professor, Department of Sports Management and Coaching, Lakshmbai National Institute of Physical Education, Gwalior (M. P.) India

²Associate Professor, Department of Sports Biomechanics, Lakshmbai National Institute of Physical Education, Gwalior (M. P.) India

Abstract: Many studies have sought to assess the effects of physical exercise on senior citizens. There is a need to know how well senior citizens can tolerate exercise programs without risking their health. The main purpose of the research study was to evaluate the effects of a calisthenic strength training program on Senior citizens' upper body strength. To complete this study, 40 Senior Citizens were selected as the subjects from urban areas of Gwalior. The age group of subjects ranged from 60 years to 72 years. All the subjects were residents at different places of Urban Areas of Gwalior. The functional efficiency parameter selected for this study was Upper Body Strength, A whole twelve weeks on alternate days for a 50-60 minutes training program was employed. After the completion of twelve weeks training program, data were collected as a raw score from the groups on physical fitness parameters. The paired t-test was employed to find out the significant difference in upper body strength. After calculation t-value was obtained as-34.720, which was greater than the tabulated t value of 2.021 at the .05 level, and found a significant difference in a selected variable.

Keywords: Calisthenic exercise, Functional Efficiency, Strength

1. Introduction

It is a statement of Arabic quote, "Health is a crown on the good person's head but only the sick seems to see it". According to Nieman, "Health promotion is defined as the science and art of helping people change their lifestyle to move towards a state of optimal health". This quote is significantly attached to the health improvement and enthused long-ago by W. H. O. definition "Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity". Physical Education makes a person fit, alert, attentive, balanced, and adjustable physically, mentally, emotionally, and socially so these all four aspects of health may be gained through physical education.

Physical soundness means the ability to accomplish several tenable, carefully prepared bodily activities devoid of unwanted tiredness. It also considers the total quality of life, continuously taking part in intensive physical activities which increased soundness of the body for a better lifestyle and vice versa.

Recent QOL research has focused on the subjective perception of senior citizens as contrary to the purposeful conditions of their life. The initial instinctive thought is to state that monetary gains can lead to the happiness of the individuals therefore prosperous individuals possess a better quality of life than poor people. Health may be assumed to be a prominent factor in the quality of life. However, well-being and prosperity don't necessarily result in contentment. After a particular point of time the wealth required to fulfill the necessities, the monetary gains are not necessarily related to contentment.

The mental advantages of participating in yoga exercises like reduction in despair and nervousness or improved temper are observed frequently. Yoga intends to improve a

person's capacity by way of achieving his internal righteousness and internal righteousness of others too. Yogic exercise is enjoyable physical activity for all the people of different age groups to be physically powerful, intellectual, and more initiative enhances our religious and psychological health. Senior citizens can't do rigorous exercises. Even in old age, the problem of heart and diabetes occurs because of eating habits and the quality of food. So, in this age, yoga is considered to be the only way where the continued movement is allowed for an adequate cardiac exercise impact lower to medium intensity.

The present study was conceptualized to analyze the freehand exercise effect on upper strength of effects of Senior citizens and therefore it was hypothesized that there would be a significant difference of freehand exercise training on upper strength of effects of senior citizens.

2. Methodology

40 Senior Citizen males from Gwalior were chosen for the current study and all of the subjects chosen were between the ages of 60 and 72. All of these subjects were examined by a physician to ensure that they were physically fit to participate in the training program, and only those who were recommended by the physician were chosen for the study. Based on the literature available, experts' suggestions, and the researchers' understanding of the Upper-body strength was chosen as a physical fitness parameter and an Arm curl test was used to assess the selected variable on senior citizens. Below table shows the training protocol:

Calisthenics Exercises and Yogic Exercise	
1. Squats	1. Tadasana or palm tree pose
2. Push-ups	2. Naukasana
3. Curls	3. Marjariasana or cat-cow pose
4. Lunges	4. Kapalbhathi
5. Front raises	

Volume 11 Issue 2, February 2022

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

The exercise was modified as per the age level of subjects; for example, modified Squat, Push-ups, etc. The subjects were given the training program on the ground in Gwalior. All subjects were properly instructed regarding the procedure of the tests before the actual administration of the training program, and each subject was given the necessary number of practice trials to gain experience with the actual conduct of the test. The morning sessions were used to administer the training program. The tests took place from 7: 00 a. m. to 8: 00 a. m. session. A 12-week program for jogging, calisthenics training was developed independently. A pre-test, post-test, random group design was used to see the effects of training on selected physical variables of Senior Citizens.

A 12-week training program was designed for data collecting, which was created with the help of the guide. Physical education teachers also assisted with the training program's implementation. Before the start of the training program, subjects were given a pre-test on physical variables. Following the completion of the 12-week training program, post-data on selected physical variables were collected from the group.

Descriptive statistics were used to compute mean, SD, minimum, maximum, and variance, and paired 't-test was used to find out the significant difference of a training program on senior citizen's upper arm strength and level of confidence was set at 0.05. All the statistical technique was employed by using SPSS version 20.

3. Result & Discussion

Descriptive-analytical measures were calculated and presented in Table-1:

Table 1: Descriptive Analysis of Physical Variables

Test items	Groups	Mean	SD	Std. error mean
Callisthenic	Pre	10.75	1.77	.2790
	Post	16.78	1.29	.2040

The value of the mean, SD, and standard error of the mean for the data on upper body strength in the pre & post-testing were shown in table 1 and reveals that the pre-mean value for the freehand training group was 10.75, and the post-mean value for the same group was 16.78.

The mean values of the group pre and post-test on upper body strength are presented graphically in figure 1.

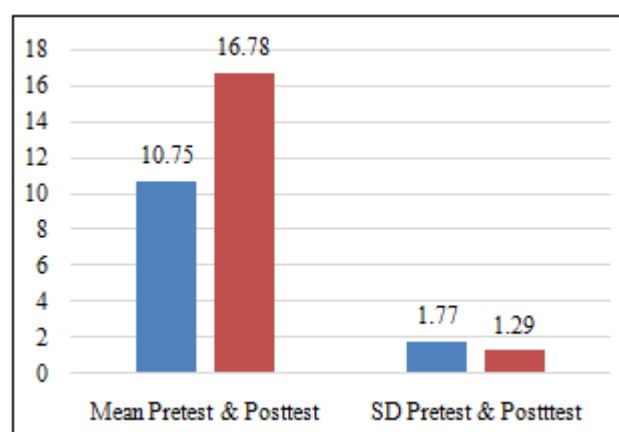


Figure 1: Comparison of Mean and SD of Pretest and Posttest of Arm curl

Table 2: Paired t-test

	Paired differences					T	df	Sig (2-tail)
	Mean	SD	SE (Mean)	95% confidence interval of the difference				
				Lower	upper			
Pair 1 pre & post arm curl	-6.025	1.097	.17353	-6.375	-5.674	-34.720	39	.000

The calculated t was obtained as -34.720, which was greater than the tabulated t value of 2.021 at the .05 level. It has been observed that there was a significant difference among the pre & post-mean of senior citizens Arm curl.

4. Conclusion

The data demonstrated a substantial difference between the group's pretest and posttest in the physical fitness aspects of the upper body strength. There were significant variations between a senior citizen's pretest and posttest. For upper body strength, the Calisthenics Exercise Group had significantly different physical fitness measures. As a result, it can be concluded that such a training program can be adopted to improve the upper body strength of older citizens to promote a healthy lifestyle.

References

[1] Abe, T., DeHoyos, D. V., Pollock, M. L., & Garzarella, L. (2000). Time course for strength and muscle thickness changes following upper and lower body resistance training in men and women. *European Journal of Applied Physiology*, 81 (3), 174-180.

[2] American College of Sports Medicine position stand. Progression models in resistance training for healthy adults. (2009). *Medicine Science in Sports and Exercise*, 41 (3), 687-708.

[3] Bottaro, M., Veloso, J., Wagner, D., & Gentil, P. (2011). Resistance training for strength and muscle thickness: Effect of several sets and muscle group trained. *Science & Sports*, 26 (5), 259-264.

[4] Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55 (1), 56-67

[5] Nieman, D. C. and Facsm, P. H. (1986). *Fitness and Sports Medicine: A Health-Related Approach* (3rd Edi). California: Mayfield Publishing Company, 29.

[6] Rikli R. E. & Jones, C. J. (2002). Measuring functional fitness of older adults. *The Journal on Active Aging*, 24-30.

[7] Shyam Narayan Singh. Effect of yogic exercises on the vital capacity of senior citizens of Muzaffarnagar.

