



# Effect Of Pilates And Calisthenics Exercise On School Girls With Special Reference To Self Concept And Self Esteem

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**Abstract:** Fitness activities are essential for children's future development and health in elementary schools. As particular school circumstances determine the requirement for physical fitness routines that can provide results even with limited resources, issues arise. It was the goal of this study to examine the impact of a modified exercise Programme for **school girl students**. Physical fitness is a life long journey that begins at birth and ends at death. Physical activity has a wide range of effects, ranging from ideal performance in all areas of life to severe disease and dysfunction at the high and low ends of the fitness spectrum. Providing a regular schedule of healthful physical activities related to health education procedures is essential so that students can acquire the strength and vigor and the skills necessary for an effective and prosperous adult life.

**Key Words:** Pilates, Calisthenics Exercise, Self-Concept, Self-Esteem, School Girls.

## INTRODUCTION

For both the present and the future, physical education is essential to **mankind**. It is a physical education Programme that aims to cultivate the complete potential of a child's body, mind, and spirit. It makes him physically fit and then keeps him physically fit. Sound mental health follows on from a healthy body. In order to lead a healthy and productive life, physical fitness is an essential component. Physical, mental, and emotional health all play a role in a person's overall well-being. The more physically fit someone is, the longer they can keep going, the more efficiently and quickly they can perform, and the faster they can recover from exhaustion.

Our society's cultural standards may be to blame for the rise in cardio vascular health issues in recent years. Physical education could have a bigger impact on the establishment and maintenance of long-term fitness habits, despite the fact that this suggests several factors.

Also awkward are the lengthy benches made of a single piece of wood used in schools for tiny children. When they can't sit still due to exhaustion, the animals are frequently punished for wiggling around. The backs of the seats in classrooms should always be facing the students. As they write at their desks, girls lean forward

and rest their arms on the surface of their desks. If you are in this difficult position, your chest is constricted, your arms and shoulders are erect and your head is cocked backwards like a bent bow. Because of this, kids spend hours hunched over their book, evolving into this unappealing form.

As you may be aware, the word "Calisthenics" comes from two Greek words that mean "power and beauty."

1. In doing so, they put the entire system into motion.
2. Increase the chest size.
3. Bring your shoulders down to your ears.
4. Make sure the form is upright.

### Sit and Reach Test

It was the second of two tests used to evaluate abdominal and lower back-hamstring musculoskeletal functioning. Using the Modified Sit-ups Test and the Sit -and-Reach Test, the researchers assessed abdominal strength and flexibility, respectively (Rocha et al., 2013).

**Figure 1**



**Figure 1: Sit and Reach Test**

### Sit Ups

A flat back with knees bent and feet on the floor with the heels not more than a foot from the buttocks was instructed to a learner. The knee angle was maintained at a constant 90-degree angle. As the elbows were pressed firmly the floor, the fingers were intertwined and positioned behind the neck. A companion had a firm grip on the feet. In order to get into a sitting position, the pupil bends down and touches his or her elbow to his knee. We performed this exercise repeatedly as quickly and as many times as feasible within the allotted period.

**Figure 2**



**Figure: 2 Sit Ups**

## REVIEW OF LITERATURE

At the early stages of puberty, when children tend to become less active, organized physical activity in school plays an important role in promoting health and ensuring proper physical development **(Mello et al 2004 as cited in Nelson et al, 2006)**.

Regular muscular fitness should be considered for school-based physical activity settings as well as aerobic training. Aside from the obvious health and physical conditioning benefits, strength training can also be utilized to encourage students to participate actively in physical education classes (Benelli & Piagentini, 2012) or to improve their commitment to physical activity programmed (Feigenbaum et al.2013).

Among the different exercise modalities in strength training (e.g., free weights, machines, elastic bands, manual resistance), calisthenics exercises, in which subjects use their own bodyweight as resistance, are practical and low-cost options that can stimulate the neuromuscular system of children and adolescents (La Scala & Evangelista, 2016).

Physical fitness can be properly structured through free exercise, self-activities, stunts and gymnastics, as well as a number of other games according to grade level. According to Will goose, “Physical fitness indicates that the body's organic systems are working properly so that a fit man may engage in a wide range of activities, from work to play”.

At least three times each week for six weeks, Sharkey monitored the intensity and duration of exercise in college boys. When Max Vo2 and physical working capacity were evaluated, the analysis failed to identify any significant treatment or interaction effects for any of the test conditions. The group with a higher level of intensity improved more, but the differences between individuals meant that the gains were not statistically significant.

Calisthenics alone, in combination with volleyball, and volleyball alone were analyzed by Franks and Moore in an effort to establish their impact on physical fitness. For five weeks, each of the three groups of 16-year-old males exercised five days a week. The gains in fitness among the calisthenics and volleyball groups were comparable to those seen in the calisthenics alone group. In a fitness test, volleyball had the least impact on results.

In a 4th grade class that met four times weekly for seven months, Fabricio's added an extra three minutes of exercises. The control group had no additional calisthenics in their physical education curriculum. In both groups, post-training improvement was significant, although the experimental group performed significantly better than their control counterparts. The extra calisthenics were to blame, according to Fabritius' assessment.

## OBJECTIVES OF THE STUDY

- 1) **To study the health-related physical fitness components among School Girls.**
- 2) **To explore physiological variables and body composition among School Girls.**

## METHODOLOGY

Research at the most basic level has been carried out using the internet's wealth of information. Second-hand information is being used for exploration and analysis of the data. The information has been gathered from an

external source and synthesized. The primary external source of information for the entire study was an electronic database, sometimes known as a computerised database.

Google Scholars Indexed research publications served as the foundation for this investigation in the present study.

## RESULTS AND DISCUSSION

**Table 1**  
**Calisthenic Exercises Training Schedule**

| Exercise          | Developments             | LOAD FORMS |           |             | Alternate Method |
|-------------------|--------------------------|------------|-----------|-------------|------------------|
|                   |                          | Intensity  | Frequency | Duration    |                  |
| Free Calisthenics | Total System of the body | 40 - 60%   | 5 Nos     | 3-4 Minutes | Slow to Medium   |
| Upper Extremities | Max. Strength            | 50%        | 10 Nos    | 5-6 Minutes | Medium           |
| Trunk             | Strength                 | 55%        | 6 Nos     | 5 Minutes   | Medium           |
| Trunk             | Relative Strength        | 55%        | 8 Nos     | 5 Minutes   | Medium           |
| Lower Extremities | Explosive Strength       | 60%        | 12 Nos    | 6 Minutes   | Speed            |

Physical and physiological factors of each participant were bolstered and strengthened through calisthenics exercises.

**Table 2**  
**Massage Manipulations Training Schedule**

| Exercise | Developments             | LOAD FORMS |           |           | Alternate Method |
|----------|--------------------------|------------|-----------|-----------|------------------|
|          |                          | Intensity  | Frequency | Duration  |                  |
| Hacking  | Toning up muscle tissues | 40 - 50%   | -         | 5 Minutes | Slow to medium   |
| Slapping | Toning up muscle tissues | 40 - 50%   | -         | 5 Minutes | Slow to medium   |
| Beating  | Toning up muscle tissues | 40 - 50%   | -         | 5 Minutes | Slow to Medium   |
| Tapping  | Toning up muscle tissues | 40 - 50%   | -         | 5 Minutes | Slow to Medium   |
| Cupping  | Toning up muscle tissues | 40 - 50%   | -         | 5 Minutes | Slow to Medium   |

The circulatory, neurological, and lymphatic systems are only a few of the body systems that are affected by massage techniques.

**Table 3****A Descriptive Profile of the Experimental and control groups**

|                              |           | Control | Experimental | Mean Difference | t - Ratio |
|------------------------------|-----------|---------|--------------|-----------------|-----------|
| Step Test (PFI)              | $\bar{X}$ | 56.65   | 53.20        | 3.45            | 0.98*     |
|                              | S. D.     | 10.55   | 10.60        | 0.05            |           |
| 9-minute run (yd)            | $\bar{X}$ | 1483.90 | 1482.20      | 1.70            | 0.02*     |
|                              | S. D.     | 225.90  | 229.30       | 3.40            |           |
| Height (cm)                  | $\bar{X}$ | 137.40  | 138.70       | 1.30            | 0.71*     |
|                              | S. D.     | 5.50    | 5.45         | 0.05            |           |
| Weight (kg)                  | $\bar{X}$ | 33.27   | 24.40        | 1.13            | 0.46*     |
|                              | S. D.     | 5.32    | 8.90         | 3.58            |           |
| Triceps-- Girls (mm)         | $\bar{X}$ | 13.75   | 13.20        | 0.55            | 0.25*     |
|                              | S. D.     | 4.50    | 4.30         | 0.20            |           |
| Sum of Skinfolds-- Boys (mm) | $\bar{X}$ | 17.00   | 19.40        | 2.40            | 0.66*     |
|                              | S. D.     | 3.97    | 10.20        | 6.23            |           |

Table 3 shows that there was no statistically significant difference between the groups of the remaining variables. **It offers insight that both groups get effect from various modules of the exercises.**

**Table 4****Analysis of Covariance of Diastolic Blood Pressure**

| Test               | Source  | Sum of Square | Df | Mean Square | F- Value |
|--------------------|---------|---------------|----|-------------|----------|
| Pre- Test          | Between | 55.654        | 17 | 3.274       | 2.425    |
|                    | Within  | 70.127        | 52 | 1.348       |          |
| Post-Test          | Between | 887.21        | 17 | 52.18       | 4.440*   |
|                    | Within  | 611.21        | 52 | 11.75       |          |
| Adjusted Post Test | Between | 968.18        | 17 | 56.95       | 4.541*   |
|                    | Within  | 652.12        | 52 | 12.54       |          |

Systolic blood pressure before training was not statistically different between the experimental and control groups, according to the F ratio of 2.425. This suggests that the two groups' random selections were successful.

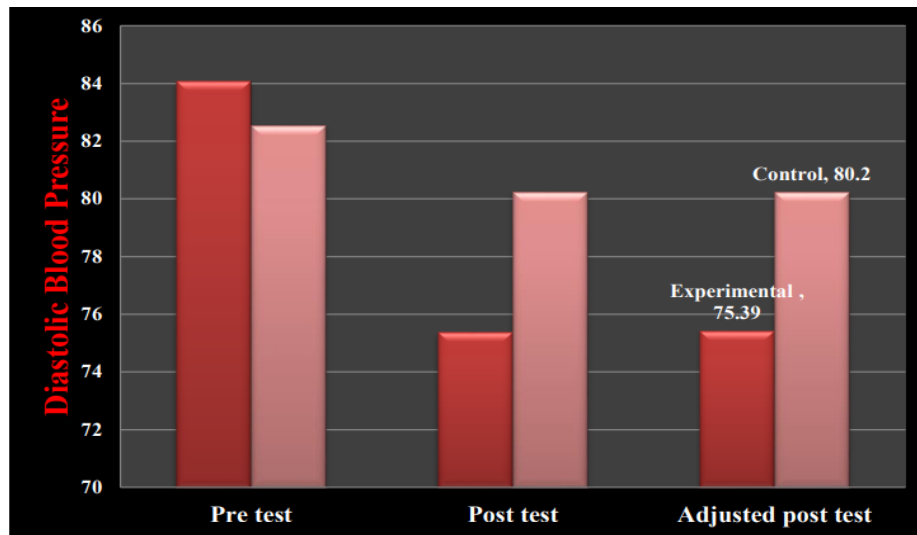
**Figure 3**

Figure: 3 Pre-test, Post-test and adjusted Post-test Performance of diastolic Blood Pressure

It is clear from Figure 3 that after 12 weeks of training, both the Experimental group and the adjusted post-test had improved their diastolic blood pressure performance, and this improvement was also seen in their systolic blood pressure performance (Raut et al., 2003). The diastolic blood pressure of the control group did not improve between the pre- and post-tests.

## CONCLUSION

It is clear that including calisthenics strength training into standard physical education programmed has a large impact on students' strength and has just a minor impact on their power. As a complement to typical PE lessons, calisthenics exercises can be a realistic and cost-effective option because of its practicality.

Calisthenic exercises and massage manipulations were used in this study to examine the effects on selected physical fitness components, physiological variables, and body composition of high school females.

More than massage manipulation, abdominal strength and endurance, flexibility cardio-respiratory endurance, and breath holding time were considerably enhanced by Calisthenics workouts in the higher secondary school girls studied.

A significant improvement in abdominal strength and endurance, flexibility, cardio-respiratory endurance, breath holding time, resting pulse rate, body fat, and systolic blood pressure observed during the second, fourth, sixth, eighth, and tenth weeks of the training programmed as a result of specific callisthenic exercises.

The present study offers understandings of basic purpose of calisthenics exercises and its linkages with self-esteem and self-concept in school girls in different experimental settings.

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