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# Effect of yogic asanas on physical and mental ability of sports girls

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**Abstract**
The aim of the present paper is to find out the effect of yogic asanas on physical and mental ability of sports girls. For achieving this aim twenty (20) sports girls were taken as subjects and given training programme of ten yogic asanas. Abdominal and shoulder strength, speed, endurance, agility and power were taken as components and AAPHERD physical fitness test battery was used for measuring physical ability. To measure mental ability, a group test of general mental ability by S. Jalota was used. The yoga training programme was scheduled for 12 weeks and t-test was applied to find out the difference between pre-test and post-test mean scores of sports girls on physical and mental ability. The results of the present paper depict that sports girls significantly improved their abdominal and shoulder strength, endurance, agility, power and mental ability after the training of yogic asanas, whereas no significant improvement was found in speed.

**Keywords:** yogic asanas, physical ability, mental ability

## Introduction
Human beings are magnificent creatures but they have added many complexities to their life. A healthy and fit person is an asset to humanity while an unfit individual is a curse for himself or herself as well as a burden to the society. Neglect of the body creates physical, physiological and psychological problems. In Bhagavad-Gita Yoga is defined as 'yog karamsu koshalam' which means yoga is an art to do the work skillfully. Today, the focus is more on Yoga's practical benefits. Yoga is a process, contributing to the concept of focusing on one's awareness, while performing specific postures. Yoga believes in total health, aiming at physical and mental well- being and higher spiritual attainments. Physical health and mental health often go hand-in-hand. Asanas are special positions of the body that strengthen, purify and balance the endocrine nervous and circulatory systems. Kuvalayananda and Vinker (1963) [7] have rightly pointed out that the yogic practices, particularly asanas, are supposed to reduce the high activation level and psycho-physiological disequilibrium and also contribute to steadiness, psychomotor co-ordination and emotional stability. Yoga has been studied and found to have positive effects on physical fitness, mood, anxiety level, and cognitive functioning (Abadi & Venkatesan, 2008; Berger & Owen 1992; Netz & Lidor 2003; Prakash, Dubey, Abhishek, Gupta, Rastogi, & Siddiqui, 2010; Ross & Thomas, 2010) [2, 3, 9, 10, 11]. According to shelley wu, a yoga therapist "Asanas promote clear thinking, when doing asanas the yogi must exercise intense concentration and precise body control, which also contributes to freeing the mind from mental disturbances, reduction of nervousness, irritability, confusion, depression and mental fatigue". The need of yoga is of immense importance for sports girls as sports persons undergo variety of physical and mental variations during practice as well as competition. Yoga helps a sports person to feel and understand the body processes more accurately, thereby learning what the body needs. By understanding this, an athlete can work on areas that need attention with confidence. Yoga is useful for all types of sports to help prevent injuries. One gets extra agility which helps to avoid damage, provides more strength and improves a player's ability to react to a situation (Khanna, 2011) [6].

## Aim of the paper
To find out the effect of yogic asanas on physical and mental ability of sports girls.

## Hypothesis
There will be no statistically significant effect of yogic asanas on physical and mental ability of sports girls.

## Materials and Methods
To find out the effect of yogic asanas on physical and mental ability, twenty (20) sports girls were taken as subjects and given training programme of ten yogic asanas i.e. Padamasana, Vajrasana, Paschimottanasana, Sarvangasana, Halasana, Bhujangasana, Dhanurasana, Shavasana, Vrkshasana and Trikonasana. Abdominal and shoulder strength, speed, andurance, agility and power were taken as components for measuring physical ability and AAPHERD physical fitness test battery (1976) [1] was used to measure physical ability which included Flexed Arm Hang, Sit ups, 50 Yard Dash, 600 Yard Dash, Shuttle Run and Standing Long Jump as test items. To measure mental ability, a group test of general mental ability by S. Jalota (1984) [5] was used. The duration, load and intensity of the training was based on the results of the pilot study. The yoga training programme had been scheduled for 12 weeks. It was given six days a week except Sundays in the morning from 7.00 a.m. to 8.00 a.m. Before giving training of yogic asanas, five minutes for warming up were given. In the same way after the training programme, five minutes cooling down period was added to the training programme. The number of repetitions and duration of the training programme was gradually increased.

**Statistical Procedure**

The data obtained was compiled and tabulated variables-wise and. t-test was applied to find out the difference between pre-test and post-test mean scores of sports girls on physical and mental ability.

**Result and Discussion**

The results of the present experiment have been presented in the following tables:

**Table 1:** Significance of difference between pre-test and post-test score of sports girls on physical ability

| | N= 20 | PRE-TEST | | POST-TEST | | | | |
|---|---|---|---|---|---|---|---|---|
| S. No | Test items | M1 | SD1 | M2 | SD2 | MD | SEDM | t-value |
| 1. | Sit Ups | 13.70 | 3.70 | 17.20 | 04.51 | 03.50 | 0.866 | 4.04* |
| 2. | Flexed Arm Hang | 13.95 | 6.51 | 24.60 | 12.53 | 10.65 | 2.228 | 4.65* |
| 3. | Standing Long Jump | 57.55 | 6.33 | 60.40 | 07.06 | 02.85 | 0.969 | 2.94* |
| 4. | Shuttle Run | 13.55 | 0.82 | 12.75 | 00.96 | 00.80 | 0.186 | 4.30* |
| 5. | 50 Yard Dash | 10.90 | 1.68 | 10.65 | 01.56 | 00.25 | 0.190 | 1.31 |
| 6. | 600 Yard Run & Walk | 206.70 | 36.23 | 173.60 | 23.39 | 33.10 | 7.207 | 4.59* |

* Significant at 5%, t > 2.10

**Table 2:** Significance of difference between pre-test and post-test score of sports girls on mental ability

| | N= 20 | PRE-TEST | | POST-TEST | | | | |
|---|---|---|---|---|---|---|---|---|
| S. No | Test item | M1 | SD1 | M2 | SD2 | MD | SEDM | t-value |
| 1. | Mental Ability | 23.70 | 9.34 | 30.55 | 11.25 | 06.85 | 1.451 | 4.72* |

* Significant at 5%, t > 2.10

**Graphical presentation of Table – 1 and 2**

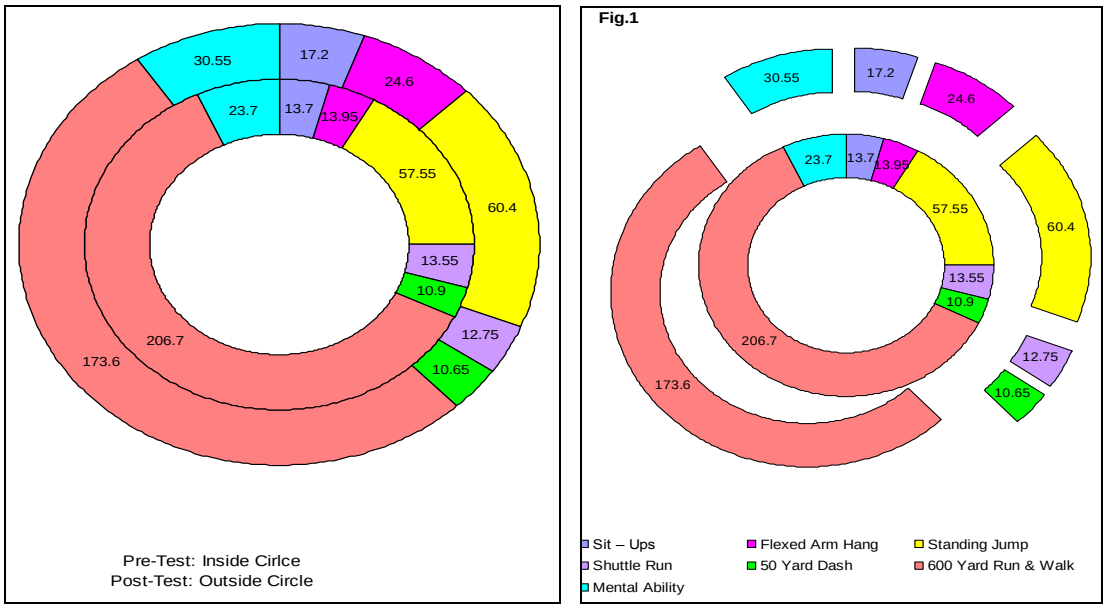


**Fig 1**

**Result**

In table 1 and 2 comparative results of pre-test and post-test mean scores of sports girls on all the selected variables are presented. The results presented in table-1and 2 show that the post-test mean score of sports girls on sit ups, flexed arm hang, standing long jump and mental ability are 17.20, 24.60, 60.40 and 30.55 respectively which are higher than that of pre-test mean scores i.e. 13.70, 13.95, 57.55 and 23.70 respectively. Whereas the post-test mean scores of shuttle run, 50 yard dash and 600 yard run and walk i.e. 12.75,10.65 173.60 respectively have been found less than the pre-test mean scores i.e. 13.55, 10.90 and 206.70. The results also indicate statistically significant improvement has been found between pre and post-test mean scores of sit ups, flexed arm hang, standing long jump, shuttle run, 600 yard run and walk and mental ability with t= 4.04, 4.65, 2.94, 4.30, 4.59 and 4.72 respectively. In the case of 50 yard dash no statistically significant difference has been observed between pre-test and post-test scores as the obtained t-value (1.31) is less than the required table value of t=2.10 to be significant at five percent level.

**Discussion**

The results of the table 1 and 2 reveal that the sports girls has shown significant improvement at post-test stage in their performance on almost all the variables. Although the mean score of subjects on shuttle run, 50 yard dash and 600 yard run and walk has decreased. This decrease is in timing indicates betterment in performance level of speed, endurance and agility. So the training of yogic asanas to the subjects has been

found to be significant in the improvement of physical ability as well as mental ability for sports girls. The findings of Gharote (1976) [4] also lend support to the present findings according to which yogic asana improve various components of physical fitness such as flexibility, strength, endurance, speed, balance and cardiovascular fitness.

**Finding**

The results of the present paper depict that sports girls significantly improved their physical ability components namely abdominal and shoulder strength, power, agility and endurance as well as mental ability after the training of yogic asanas whereas no statistically significant improvement was found with regard to their speed.

**Conclusion**

It can be concluded from the findings of the present paper that yogic asanas are beneficial for improving physical and mental ability of sports girls. Hence training of yogic asanas can be of immense value for the development of physical and mental ability of sports girls. As enumerated in various research studies the findings of the present paper are in line with the results of research study done by Malathi and Damodaran (1999) [8] which indicate a tranquil state of mind during routine activities, accompanied by increased attention during stressful situations by the practice of yoga. It also improves the general well-being of an individual and strengthens mental resolve.

**Significance of the paper**

Yoga is a means of attaining perfect health by maintaining harmony and achieving optimum functioning through complete self-control. The present paper is highly significant for the sports fraternity for improving performance in sports with the help of yogic asanas which constitute the physical basis of Yoga and can help in the improvement of physical and mental ability of sports persons, a key concern for every sports person. Stating about the significance of yoga, Dr. Rita khanna in one of her yoga articles, rightly said that in sports competitions, athletes at all ability levels tend to have a fear of losing, of other competitors, or of developing mental deterrents to excellent performance. Yoga trains us to be our best every single moment, to hold ourselves at our highest standard and to go beyond our preconceived limitations.

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