Effect of asanas on selected health related physical fitness components

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Abstract
The purpose of the study was to investigate the effect of asanas on selected health related physical fitness variables of the adolescents. The subjects for this study were thirty male students randomly selected from Dadapatil Rajale Arts and Science college Adinath Nagar. The age of the subjects ranged between 16-18 years. The subjects were equally divided into two groups namely one experimental and one control group. The treatments to the experimental groups were assigned randomly; one for Asanas and another group served as control group. The treatment schedule was prepared for twelve weeks. The experimental treatments were employed for 45 minutes a day in five days a week for twelve weeks duration. Pre and post-test data of all the subjects from two groups were collected before and after the experimental treatment period of 12 weeks. The selected variables were Cardio-respiratory Endurance, Flexibility, Muscular Strength and Endurance. The data was analyzed by employing analysis of covariance at the 0.05 level of significance. The result of the study indicates that practice of asanas had significant effect on Cardio-respiratory Endurance, Flexibility, Muscular Strength and Endurance of the subjects.

Keywords: Asanas, cardio-respiratory endurance, flexibility, muscular strength and endurance

1. Introduction
The word yoga comes from the Sanskrit word ‘yuj’ which means to unite or join together. To unite the individual soul, with the universal soul i.e. God. Yoga is a timeless tradition, originating from Rig Veda, with a history of more than 5000 years. The father of yoga, Maharishi Patanjali, defines yoga as “Yogas Chitta Vritti Nirodha” meaning “control of the fluctuations of the mind."

Yoga is an inward journey that creates an awareness of yourself and leads you to self-transformation. It is an ancient science of self-development and system that purifies your mind and body and maintains perfect balance and harmony between them. In another it is an art of controlling your mind, body and breath and unlocking the hidden potential energies. Yoga is preventive care and holistic system of healing that protects and heals without any medication and natural beauty therapy that keeps you young and glowing from inside. Yoga has also been described as wisdom in work or skilful living amongst activities, harmony and moderation. In Hath Yoga, Yoga techniques are used for therapeutic purpose. Practice of Yogasana makes the body fit and strengthen it, Satkarma is a means to purification of body, Mudra brings about steadiness, practice of Pranayama results in lightness of body, Partyahara leads to calmness, practice of Dhyayana experiences the self and Samadhi results in merging consciousness with the object of meditation; thus, there is no doubt of liberation. Yoga protects religion and education. One can attain knowledge by yoga only. There is no strength as yoga and without yoga moksha (salvation) is impossible. Yoga is a philosophy that makes you to accept with a balance of mind everything that comes in the way of your life. Yoga that concentrates on physical health and mental well-being. Through practicing various body postures (asana), breathing techniques (pranayama), and meditation, it is believed that one can obtain a sound physical body as well as a calm and peaceful mind. Regular practice of a variety of yoga techniques have been shown to lower heart rate and blood pressure in various populations. In recent years, it has become more apparent that people need techniques to help them cope with the everyday stressors of modern life. With stress related hypertension and cardiovascular disease on the rise, these hatha yoga techniques may provide a platform for
health and well-being. This form of yoga may provide much needed physical and mental therapy. Asanas are the static posture accredited with values of promoting physical fitness. Element of exertion with characteristics other physical exercises is eliminated in the system of asanas. Asanas have been classified into meditative and cultural poses. The aim of cultural poses is to produce a state of physiological balance in the human body so that it can possess the best organic vigor. Yogic Asanas help in the prevention and cure of many physical diseases, especially those of the digestive tract by regulating the secretion of various duct and ductless gland. Apart from all these yoga is an extremely economic practice.

The word asana is derived from the Sanskrit word ‘Aas’ which means ‘existence’, thus, state of existence is Asana or Position. Patanjali defines Asana as a Steady and Comfortable position so the first and third step that is taking the asana and releasing the asana should also be supporting to the definition. “Practice of Asanas may be called as an Exercise of a perfect scientific method”. Asana is a specific position which opens the energy channels and psychic centres. Asanas help to improve the physical fitness of an individual. Asanas are practised to develop the ability to sit comfortably in one position for an extended period of time; it is an ability necessary for meditation. It is necessary for a person to maintain the effective functional capacity of the internal organs. Practice of Asanas removes restlessness, instability, laziness and obesity from the body and provides satvik glow and grandeur. In the world, no other activity than the asana is known for the other effects such as increased efficiency, stamina, increased immune capacity, quiet & calm mind, easy control over emotions, and improvement in attitude. Many studies have been done to highlight the positive effect yoga; this study was an attempt to find out the effect of certain yogic asanas on Cardio respiratory Endurance, Flexibility, Muscular Strength and Endurance of the subjects.

1.1 Objective of the Study
The purpose of the study was to find out the effect of yoga asanas on effect of asanas on selected health related physical fitness components youths studying in college.

1.2 Hypothesis
It was hypothesized that there would be significant changes in the selected health related physical fitness components of the subject who were sedentary in nature, after the training of twelve weeks.

2. Methodology
The purpose of the study was to investigate the effect of asanas on selected health related physical fitness components. The investigator was more interested to find the effect of asanas particularly on the youths who had not been taking part in any other physical activity.

2.1 Subjects
Thirty male student selected from dadapatil rajale arts and Science College. The age of the subjects ranged between 16 – 18 years. The only purpose of selecting subjects over 16 years was to insure that the selected subjects had attained puberty. The subjects were divided into two equal groups and the distribution was done randomly. one experimental groups were (N=15 each) namely Asanas (G1) and the second group served as control group.(N=15 each) (C).

2.2 Treatment
The training schedule was prepared for twelve weeks. The practice schedule included 12 asanas for asanas group initiated and ended with Surya Namaskar asanas only those asanas were selected who plays direct role on the cardio respiratory system. The experimental treatments were employed for 45 minutes a day in five days a week for the period of twelve weeks. The second group served as control groups (C).

2.3 Collection of Data
Cardio-respiratory Endurance, Flexibility, Muscular Strength and Endurance variables chosen for the study. Standard test and measurement procedures were adopted to collect data for the study. The Cardio-respiratory Endurance was measured with the help of 12 mint run and walk. The Flexibility was measured with the help of sit and rich and Muscular Strength and Endurance was measured with the help of sit up test. The Pre and post test data of all the subjects from two groups were collected before and after the experimental period of twelve weeks. The data was analyzed by employing analysis of covariance at the 0.05 level of significance.

3. Results

Table: Ancova and Scheffe’s Post HOC Test on Selected Health Related Physical Fitness Components

<table>
<thead>
<tr>
<th>Variables</th>
<th>AG Mean</th>
<th>CG Mean</th>
<th>AG Vs CG Mean Difference</th>
<th>‘F’</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRE</td>
<td>1860</td>
<td>1715.5</td>
<td>144.5*</td>
<td>6.774*</td>
<td>107.19</td>
</tr>
<tr>
<td>Flexibility</td>
<td>9.88</td>
<td>7.13</td>
<td>2.75*</td>
<td>6.86*</td>
<td>1.46</td>
</tr>
<tr>
<td>Muscular Strength &amp; Endurance</td>
<td>21.10</td>
<td>16.95</td>
<td>1.25</td>
<td>9.02*</td>
<td>1.542</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level of confidence, Tabulated value F (0.05) (2, 72) = 3.168

(AG – Asana Group, CG – Control group, CI - Confidence interval)
3.2 Discussion of Finding
The study of comparative effect of selected asana practices on health related physical fitness among the age of the subjects ranged between 16 – 18 years. Finding of the study in dictated that, the significance between 12min run /walk, sit and reach and sit-ups are significantly at 0.05 level of confidence with 72 degree of freedom.

3.3 Conclusion
Asana practices fast improved the Health Related Physical Fitness Components.
Asana practice shows significant improvement in flexibility.

4. Reference