

STUDY THE EFFECT OF PHYSICAL EXERCISE AND YOGASANA ON PHYSICAL FITNESS AND OBESITY OF COLLEGE STUDENTS

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ABSTRACT

For modern epidemic diseases such as mental stress, obesity, diabetes, hypertension, coronary heart disease, and chronic obstructive pulmonary disease, yoga has been the focus of study in the past few decades for therapeutic purposes. Individual studies report the beneficial effect of yoga under these conditions, suggesting that it can be used for the treatment of these conditions as a non-pharmaceutical measure or as a supplement to drug therapy. However for therapeutic purposes, these studies have used only yoga asana, pranayama, and/or brief periods of meditation. There's still the same general understanding of yoga, which is not right. Yoga literally means the unification of the consciousness of the person with the supreme consciousness. It comprises eight yoga rungs or limbs, including yama, niyama, asana, pranayama, dharana, dhyana, pratyahara, and samadhi. This rigorous practise contributes to self-realization, which is the main purpose of yoga. An objective look at the rungs and aim of yoga reveals that it is a holistic way of life leading to a state of full well-being and harmony with nature physically, socially, mentally and spiritually. This contrasts with modern civilization's solely economic and material developmental objective, which has brought social instability and ecological destruction.

Yoga is a multifaceted spiritual technique with one of its beneficial outcomes being better health and well-being. Asanas (physical postures), pranayama (regulated breathing) and meditation are the components of yoga which are very widely applied for health benefits. Yoga appears more like a physical exercise in the form of asanas, which can contribute to the impression that yoga is another kind of physical exercise. The goal of this paper is to discuss the commonalities and discrepancies between yoga and physical exercise in terms of principles, potential mechanisms and health benefit effectiveness. In addition to research papers available on yoga and exercise, including head-to-head comparative studies with healthy volunteers and patients with different disease conditions, a narrative analysis is performed based on conventional and contemporary yoga literature. There are some parallels between physical workouts and the physical elements of yoga activities, but also significant distinctions. Data shows that yoga interventions tend in most outcome measures to be equivalent and/or superior to exercise. Some of the elements that separate yoga

practises from physical workouts are emphasis on breath control, mindfulness during practise, and priority given to the maintenance of postures.

KEYWORDS: Anxiety, Chronic pulmonary disease, Coronary heart disease, Diabetes, Hypertension, Meditation, Mental stress, Pranayama, Yoga

INTRODUCTION

We all know that it is self-evidence that fit people are the best assets of a nation and their liability is weak. Therefore it is the duty of each nation to promote the physical and psychological well-being of its people. The success of life is usually due to the degree of physical health, technique and strategies within the limits of his or her capacity. The nation that looks for people who are physically and mentally fit makes the word rank high. It is said, therefore, that a healthy mind resides in a healthy body. There are people who have at their command all material comforts and modern facilities, but even they are worried about health. Thus, we find that everyone is ill with both emotional and physical issues. Today the world is searching for solutions to issues such as: unhappiness, restlessness, mental imbalance, hyper anxiety, stress, BP, etc. One of them is obesity & excess weight. In medical practise, obesity is one of the most common diseases and the most stressful and hard to handle.

Yoga is an ancient discipline that provides the physical mental, emotional and spiritual aspects of a person with harmony and health. "In Sanskrit, the term yoga derives from the "yug" sense of yoke, which refers to the discipline of aligning spiritual objectives between mind and body. There are several different forms of yoga, each with distinct qualities and mixtures of core components, including postures (asanas), breathing practises (pranayama), and meditation. Yoga is usually viewed as a physically considered physical health activity in Western culture, although there is a spiritual and philosophical aspect. Some of them considered yoga a holistic system that strengthens our mind, body, and spirit. One of the important yogas that enhances our breathing is Bhaskara pranayama. It is also referred to as "breathing of fire" requires intense inhalation and exhalation, allowing our body to receive a rich supply of oxygen. Yoga has historically been a part of life in Eastern culture, and yoga practitioners are believed to be able to achieve high levels of stress relief and self-regulation. According to the American Survey, over 10 million adults. The two-fold therapeutic method which prevents and cures various diseases is yoga therapy. Health-related physical conditions, including our body's cardiovascular fitness, body structure and metabolism Thus, yoga practise can improve health and overall fitness, regulate all the functions of the body in a healthy way and help provide sustainable health. When trained, yoga can be practised on an individual basis at any time. Some of the beneficial effects of yoga have been found in earlier studies to reduce blood pressure, alleviate anxiety, delay functional regression, decrease sleep disruptions, and boost the serum lipid profile. The aim of the

study is to assess the beneficial effects of yoga among yoga practitioners based on their health status and physical fitness.

Physical Fitness

Fitness is the capacity to live a life that is complete and healthy. A safe and happy outlook towards life is a totally fit human. Fitness is an utter requirement for a young man. This creates self-reliance and keeps people mentally alert. For human beings to adapt well to their environment, physical health is necessary because their mind and body are in total harmony.

It is widely understood that physical fitness is an essential part of a child's natural growth and development, and a generic description of the precise essence of physical fitness has not been universally accepted. Through study and academic research it is clear that the multi-dimensional features of physical fitness can be split into two areas: physical fitness related to health and physical fitness related to skills.

Physical health is not a static factor and, depending on variables, it varies from person to person and in the same individual from time to time. In physical education, physical fitness is possibly the most common and commonly used concept. The most significant aim of physical educators is to enhance physical fitness. It was the desire to create a scientific approach to the development of physical activity, which formed the basis of the first meeting of physical educators in 1885, when the physical education profession originated.

The Council on Physical Fitness and Sports of the United States President described the terms "physical fitness as the ability to perform daily tasks with vigour and alertness, without undue fatigue, with sufficient energy to enjoy leisure time pursuits and to cope with unforeseen emergencies".

General health means a person's ability to live with his or her abilities most effectively, which depends on the highly interrelated physical, mental, emotional, social and spiritual components of fitness. Muscular strength, muscular endurance and aerobic respiratory strength were the key physical health components defined by the President's Council on physical fitness and sports. However some other motor efficiency elements, namely agility, speed, flexibility and balance in physical fitness, were also included later on in the President's Council. But the author did not include components such as speed, agility, power and balance (which are more important for performance in listed sports) as critical components of basic physical fitness, keeping in mind the general opinion of the majority of researchers. The author, however, defines physical fitness as a group of five components, namely muscle strength, muscle endurance, cardio respiratory endurance, flexibility, and body composition. It is important to note here that some experts call such fitness tests, including the calculation of percentage of body fat, as health-related physical fitness tests.

The control of mind over body was used by the wise men of all ages and races, white, brown, yellow and black, civilised or barbarian, savages, back to the cave men. When you progress in your training, you will learn that the most important aspect of training is the mind.

- **Fitness:** - Nine elements comprising the concept of fitness have been defined by exercise scientists; each of the nine elements is described below and an explanation of how they are used:
- **Endurance** - The capacity of the muscles to perform full contracture time after time. Strength-The degree to which, by contracting against resistance, muscles can exert force (holding or restraining an object or person.)
- **Power**-The capacity in an intense burst of movements to exert full muscular contraction instantly.(Jumping, sprint/start.)
- **Agility** - The capacity in opposite directions to execute a sequence of explosive power movements in rapid succession.
- **Balance**-The power, either stationary or while moving, to control the location of the body
- **Flexibility**-The ability to reach an extended range of motion without excess tissue, i.e. fat or muscle, being impeded

Obesity

Obesity is now one of the world's burning concerns. Obesity at any age can occur. It is one of the most disruptive health threats in the world, affecting more than 30% of the world's population. It has not only caused a lot of conversation, but it has also started to be classified as a severe danger comparable to other diseases. A significant danger to our health is obesity. Some physicians, in fact, also call obesity a disease itself.

Obesity and obesity are two of today's most significant medical and wellness issues in the world. The implications seem to be both psychological and physiological. It has been estimated that ten million adolescents are overweight, comprising approximately 20% of the U.S. overall adolescent population. It has also been calculated that about one pound of extra weight each year would be gained by the average person in the nation who is 25 years of age or older. At the same time, the muscle mass of the bone is decreased by around 0.025 to 0.50 pounds each year. This yields an average net fat gain of 1.25 to 1.50 pounds, 12.5 to 10 pounds in 10 years.

We live in an automated world where machines with the simple pull of a handle or the push of a button can perform most of the tasks that used to involve strenuous physical exertion. All modern-day products are vehicles, elevators, escalators, telephones, intercoms, remote controls, electronic garages, door openers, etc.,

which reduce the amount of movement and effort needed by the human body. The factors contributing to the growth of obesity are the lack of exercise and poor diet that has affected the lifestyle of modern day people.

There is nothing; however that prevents us from converting the behaviours we now have into better ones that extend our lives. And those who are not obese need to be conscious of how their bodies are handled. Even if they are not obese today, bad eating and poor exercise habits may have detrimental effects later in life, even if there are no symptoms at present. Human history is a testament to the fact that in the absence of modern means of life, as long as man was occupied in his everyday routine work he did not have the problems of being graced by the man of today. As completed by the ancient one the growth in the field of technology has provided the modern man with numerous comforts. There is an increased productivity in the workplace and also an increase in leisure hours, a remarkable increase in production, in the manufacturing as well as production formation, dramatic improvements are available in the communication system, amazing improvement and growth in the war gadgets, there is a much improved transport system.

The advances in the field of medicine and surgery have made it possible for countries to fight against harmful diseases that cause life prolongation and reduce death rates, etc. Hand in this development has made the muscles of man inactive and lethargic, causing obesity and overweight issues, immunity decline, drug-based life, and so on. The epidemic of obesity and excess weight alone is the root cause of many human physical issues. The issue of obesity over weight, however, is not the product/result of just one single factor; there are several contributing factors, such as relaxed life style physical inactivity, eating patterns, genetics, social and psychological attitude to life, and so on. In a nutshell, all these variables have helped a great deal to make us physically vulnerable and responsible for diseases.

The culture of comfort is also the source of obesity. We ride elevators in office buildings instead of walking up one or two stairs, parents drive their children to the neighbor's instead of asking them to ride bikes or walk; home gardeners use power mowers instead of old fashion blade movers. Alas, Indians have become less and less involved, and they have become more and more dependent on machines, particularly cars, to do the job. Their ancestors had to do their own muscles.

Rating	% Fat
Malnutrition 2	< 18.0
Malnutrition 1	18.1 - 20.0
Normal	20.1 - 23.0

Over Wight	23.1 – 25.0
Obesity Type I	25.1 – 28.0
Obesity Type II	28.1 – 30.0
Obesity Type III	>30.0

RATING OF BODY MASS INDEX

Obesity happens in one's body when there is an excess amount of fat. If he has a BMI of 25 or higher, he is graded as obese. Some categorise obesity as a condition that adversely affects the rest of one's body, contributing to increased stress on the heart and other organs. Usually, individuals with a BMI of 23- 24.9 are graded as they are overweight, but if they do not change their lifestyle or seek medical attention, they also risk becoming obese.

Morbid obesity implies that the patient weights anywhere from 50 to 100 percent greater than the average weight, or more than 50 kilogrammes greater than the normal weight. Morbid obesity simply means that because of its associated health effects, the amount of extra weight a person carries is life-threatening. Sometimes, morbid obesity often greatly hinders or prevents a person from performing several daily tasks.

The Overweight and Obesity Facts:-

Research into obesity indicates that the obese condition rises with age.

- In the country, roughly 28 percent of men and 27 percent of women aged 16-24 are obese. But about 76 percent of males and 68 percent of females aged 55 to 64 are obese.
- The United States (30.6 per cent), Mexico (24.2 per cent), the United Kingdom (23 per cent), Greece (21.9 per cent) and Australia are the top five countries facing obesity (21.7 percent) 300,000 deaths are associated with obesity in the United States per year.
- 43% of teenagers watch more than 2 hours of TV a day which can contribute directly to inactivity and indirectly to obesity.
- Even a moderate excess weight (5 to 10 kg for a person of average height) increases the risk of death, especially among adults between the ages of 30 and 64.

Yogasana

Yoga, especially Hathayoga, consists of various yogic exercises, such as Asana (body postures), Pranayama (controlled breath regulation), Bandha (physiological locks or hold of semi-voluntary muscles), Kriyas

(cleansing process) and Mudras (attitude that spontaneously stimulates meditation), Swami Kuvalayananda, the father of Yoga scientific research and creator of Yoga

Yoga is a formal discipline for self-realization that originated in India. Scientific researchers, however now find its usefulness for all round personality growth along with countless spiritual as well as therapeutic applications. Yogic exercises are also becoming common in Indian schools, colleges and universities in the field of games and sports and also in the curriculum.

Yoga is a physical, mental and spiritual practise originating in modern India that aims at achieving a state of complete spiritual insight and tranquilly. In Hinduism, Buddhism and Jainism, the term is synonymous with meditative practises.

The Sanskrit word yoga, from the root yuj, has the literal sense of "yoke" It was introduced in the 2nd century BC by Patanjali as a term for a method of abstract meditation or mental abstraction. Yoga's aims are complex and differ from improving health to achieving Moksha. The aim of yoga takes the form of Moksha within the Hindu Monist schools of Advaita Vedanta, Shaivism and Jainism, which is liberation from all worldly misery and the cycle of birth and birth. Death (Samsara), at which stage there is a recognition of the Ultimate Brahman's identity.

The literal sense of the Sanskrit word yoga is "yoke" or the act of yoking or harnessing" from a root Besides its literal sense, the yoking or harnessing of oxen or horses, the word "yoga" already has a figurative meaning in Vedic Sanskrit, where it takes the general meaning of "employment, use, application and performance" In Epic Sanskrit, a sense of ' exertion, Endeavour, zeal, diligence' is contained.

Musculoskeletal and mental health changes have been documented by long-term yoga practitioners in the United States, as well as decreased symptoms of asthma in asthmatics. Regular practise of yoga raises the levels of brain GABA and is shown to boost mood and anxiety more than other workouts that are metabolically matched, such as jogging or walking.

We usually think of only the body when we talk about health, but the health of one mentor is also important-emotional, social, along with spiritual aspects. What we need is the wellbeing of "Total." Some type of physical exercises, or yoga or any sports, should be practised to achieve the above objective; of course, it can differ from person to person, It depends on a single choice. The best prescription for a sound mind and a sound body is to spend a few hours in the early morning practising yoga. The scope of this piece of research is therefore enormous.

Abdominal Power

Sit Up

Purpose: To assess strength and endurance in the abdomen.

Facilities and Equipment: The use of mats.

Procedure: The student is lying flat with knees bent on the back and feet on the floor with heels not more than 1 foot from the buttocks. The angle of the knee was no less than 90 degrees. With the elbows touching the floor, the fingers were interlocked and positioned behind the neck. The feet were tightly held by a partner. The learners then curl up to a sitting position and connect the knees to the elbows. In the timeframe required, this exercise was repeated as many times as possible.

Instructions: The subject's finger must stay interlocked and it must always come into contact with the back of your neck. Students curl up from the starting point, but with an elbow they do not push off the floor. Their elbows have to be flat on the floor or mat as they return to the starting spot.

Scoring: For each right sit-up, one point was scored. The maximum number of sit-ups done in 60 seconds was the ranking.

ANALYZING

MEANS AND STANDARD DEVIATIONS OF SIT UPS

Groups	Pre Test	Post Test	Adjusted
	Mean (SD)	Mean (SD)	Mean
Experimental group A (Physical Exercise)	3.20 (± 1.44)	4.50 (± 1.75)	4.04
Experimental group B (Yogasana)	3.60 (± 1.34)	4.50(± 1.54)	5.47
Control Group C	2.40 (± 1.07)	2.75(± 1.06)	2.69

Above table reveals that means and standard deviations of physical exercises group (3.20 ± 1.44), yogasana group (4.50 ± 1.34) and control group were (4.40 ± 1.07) respectively. Means and standard deviations of post

physical exercises group (4.60 ± 1.75), yogasana group (4.50 ± 01.54) and control group were (3.75 ± 1.06) respectively. The above findings revealed that the means of post treatment were higher than the initial means. Table shows the adjusted means of physical exercises group; yogasana group and control group were (4.04), (5.47) and (2.69) respectively.

CONCLUSION

Fitness is the capacity to live a life that is complete and healthy. A safe and happy outlook towards life is a totally fit human. Fitness is an utter requirement for a young man. This creates self-reliance and keeps people mentally alert. For human beings to adapt well to their environment, physical health is necessary because their mind and body are in total harmony.

Obesity is now one of the world's burning concerns. Obesity at any age can occur. It is one of the most disruptive health threats in the world, affecting more than 30% of the world's population. It has not only caused a lot of conversation, but it has also started to be classified as a severe danger comparable to other diseases. A significant danger to our health is obesity. Some physicians, in fact, also call obesity a disease itself.

One must have a sufficient level of physical fitness to perform the necessary amount of work in the daily routine. Not only is it beneficial to achieve success in life, but it also helps to keep life safer. From the perspective of engaging in sports and yoga and doing day-to-day work, the person must be healthy. As regards success in sports, physical fitness is the foundation of all life's activities. With the growing awareness of the relationship of exercise with health, scientific study of exercise and its beneficial effects on the body is becoming increasingly important. Physiological and biochemical experiments on laboratory animals are being supplemented with field and laboratory findings on human subjects, and acute and chronic exercise can now be clarified at cellular and molecular levels.

Yoga is a formal discipline of self-realization that originated in India. Scientific researchers, however now find its usefulness for all round personality growth along with countless spiritual as well as therapeutic applications.

Given the lack of evidence on the burden of obesity and prevalent lifestyle trends among young adults in India, the current small-scale study was conducted to identify the burden of overweight and obesity among college students in college girls in the 18-25 age group. Teenage fitness is something that has become a serious cause of concern for society in modern times. A safe lifestyle is not really lived by adolescents. People used to adopt the principle of 'early to bed and early to rise.' But now our young people don't go to bed early or get up early in the morning.

The following conclusions were drawn after reviewing the data in light of the results of the study:

1. Between the two training systems i.e. physical activity and yogasana training, major differences

were noticed.

2. In order to improve the arm and shoulder strength, abdominal strength, agility and explosive leg power of the obese girls, the physical exercises were found more effective.
3. In the case of speed and stamina variables, both courses were equally successful.
4. The physical activity regimen was considered more fitting to decrease the ratio of body mass index and body fat.
5. In the falling waist hip ratio, both the physical exercises and yogasana were similarly successful.

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