



A Study and Evaluation of Yoga and Physical Activity

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Abstract

3809

Yoga is a multidimensional spiritual device with health improvement one of its beneficial impacts, as well as other positive outcomes. Asanas (physical postures), prana (controlled breathing), and contemplation are frequently practised yoga components for their health advantages. The similarity between yoga and regular exercise may lead to the misperception that yoga is a unique form of physical activity. In terms of various principles, potential mechanisms, and health benefits, the focus of this section is to compare and contrast yoga and physical exercise. Using classic & contemporary yoga literary works as well as scientific data on asanas & workout, including head-to-head comparison trials with healthy individuals and patients with illness, a plot review is conducted. There are some similarities between physical workouts and the physical aspects of yoga, but there are also significant variances. Yoga therapies tend to be comparable to and/or superior to exercising in the majority of outcome metrics. Yoga techniques are distinguished from physical exercises by their focus on breath regulation, attention during practise, and the focus placed on posture stability. Yoga has recently gained popularity throughout the world. People are drawn to the practise of Yoga regardless of gender, age, economic class, religion, or nationality. Yoga has a broad scope and, in addition to promoting physical fitness, it promotes inward bliss and exterior coherence. Additionally, they assert that yoga promotes emotional well-being and that the practitioner develops a sense of quiet and serenity. Yoga and physical exercises have substantial distinctions in terms of practise breadth, method, and effect.

Keywords: Yoga, physical exercise, fitness, meditation, physical education, health

DOI Number: 10.14704/nq.2022.20.5.NQ22675

NeuroQuantology 2022; 20(5):3809-3815

1. INTRODUCTION

Exercise boosts serotonin levels, which helps against depression [1]. Exercises can help persons who have had an ischemic stroke improve their depression levels [2]. Yoga is the best approach for transforming one's life style. Yoga has the potential to alter the criminal nature of unsocial elements. The underlying causes of crime are dissatisfaction, egocentrism,

anger, greed, and attachment. When a person becomes aware of the fundamental structure of the ill statement or the suffering it causes, a mental shift occurs, & he lives a reasonable social life characterised by gentleness, piety, friendliness, and joy. As modernity becomes ever more stressful & tense, people recognise the significance of mental tranquilly and relaxation. Sages from antiquity established



numerous yoga systems that, when performed correctly, provide mental and physical relaxation.. Yoga is beneficial to all peoples of all generations [5]. Yoga is also compared to a variety of movement-based disciplines, particularly physical fitness exercises, as it develops appeal among individuals from many walks of life. Due to the perceived similarity of exterior movements, yoga is frequently equated with exercises. The purpose of this article is to compare and contrast yoga and physical workouts from a physiological and spiritual perspective [6].

2. YOGA

Yoga is an epistemological method of workouts and contemplation that originated in what is now India 2,000 to 4,000 years ago. There are a variety of yoga styles, within each set of practises, but all with same objective: to control the mind and body. (17). Many people practise yoga to improve their overall health and prevent sickness. [13,14]. It's also becoming more popular as a complementary treatment for depression, anxiety, low back pain, asthma, hypertension, musculoskeletal disorders, chronic obstructive pulmonary disease, and cancer, among others[15]. Yoga was shown to relieve anxiety, depression, & chronic pain symptoms.as well as enhance cardiovascular risk factors and sleep [16]. Yoga has a positive impact on cognitive performance as well as mental and physical wellbeing.

- **Surya Namaskar-** 4 min (Also known as Surya Namaskar, or sun salutation, is one of the most beneficial exercises one can do. The advantages that these exercises provide are one-of-a-kind and exceptional. Surya Namaskar is frequently done first thing in the morning, facing the rising sun. It is performed in 12 steps, each with its own posture and breathing rhythm. Shrimant Suryanamaskar was made a mandatory part of the physical training regimen in his kingdom's schools by Bhavanrao Pant Pratinidhi. He popularised suryanamaskar as just a simple physical activity for an individual's overall growth. According to Hagins et al, yoga practise using SN for more than10 minutes can provide a

portion of adequately intensive physical exercise and increase cardiorespiratory fitness in unfitorsedentary individuals [7].

- **Padmasana-** 4 min (Padmasana means lotus posture. This asana gives the appearance of a lotus. It is the best asana for contemplation.) P. B. Joshi adds that soldiers on horseback who use the Padmasana as their seat, elephant, or chariot achieve victory, & that if the figure is a design that is drawn beside a house, it gives good fortune to the occupants. He also discusses the traditional origins of belief in the impact of Padmasana, namely that after a battle between angels & demons, Vishnu blessed this at the request of his consort Laxmi, vowing that it would be more fortunate & sacred in the future than his own vehicle [8].
- **Dhanurasana-** It can strengthen the abdominal muscles, organs and increase the appetite. Therapeutically Dhanurasanam can be applied for Keel noigal [9] (Musculoskeletal Joint ailments). Most of the clinical trials on Diabetes Mellitus included Dhanurasanam as one of the Yoga-Posture for intervention. The posture of dhanurasanam can increase the abdominal pressure and blood circulation [10].
- **Sarvangasanas-** 4 min (Sarvangasana is a more advanced form of yoga that is filled with several health advantages. It is a mindset centred on entire body conditioning. Because it strengthens and maintains the interior components of your body. It is often referred to as the shoulder posture.) Selvamurthy et al. found a substantial drop in blood pressure in hypertension patients following three weeks of practise of nine sets of nine asanas; SVGN being one of these. Given the apparent haemodynamic as well as many other perturbations produced by the upside-down position assumed in SVGN, one cannot be assured of the advisability of practising this even by a healthy individual [11]. •There is currently There is no information available on the effect of this yoga practice on arterial blood pressure or other cardiovascular factors.
- **Superbrainyoga-** 1min (SuperBrain Yoga revitalises the mind by harmonising our alpha brain waves). The exercise alleviates stress and

3810



promotes psychological stability. It supports normal cognitive function.

- **Vajrasana**- 2 min (When this asana is performed, a feeling is felt throughout the body. We should approach the movement with a sense of ease. Slowly inhale and slowly exhale. Concentrate your attention on breathing while bringing the abdomen region inward and extending the chest).
- **Vrikshasana** (treestance)-1minute (Vrksasana is a standing as that improves balance, focus and mental clarity. The term derives from the Sanskritvrksa, which means "tree," and asana, which means "position." The practitioner must standing on one leg and bends the other leg so that the foot rests on the inside of the thigh. Hands are extended above the head, palms touching).
- **Shavasana** (corpse poses) - 6 minutes Yoga practitioners who practise regularly had a lower risk of developing hypertension with their age and sex matched contemporaries. The night?dip? In blood pressure, which is present in healthy individuals but may be missing in some hypertensives, is usually regained. Even in an unskilled person who may not practise Yoga consistently, Each of Shavasana and Omkar

chanting can reduce B.P. by approximately 10 - 15 mm / Hg (Chandratreya., 2011) [12].

Benefits of Yoga

Yoga practises with greater intensity and integration have been linked to greater health benefits [18,19]. As yoga's commercialization progresses, these advantages become increasingly apparent to the general public. Yoga is gaining popularity and acceptance in the United States as it enters the mainstream. Why do people practise yoga, and what motivates them to participate in (or avoid) this type of exercise, is the central question regarding yoga. Others seek yogic qualities including such self-acceptance, awareness, and a quasi-spiritual state [20]. Others use yoga as a preventative, reducing or managing disease and its associated risk factors [21]. As described below, yoga can be viewed as a complementary medicinal modality & healing outlet for individuals battling chronic condition or rehabilitating an injury. However, the most commonly cited reason for nurturing a personal yoga practise is to improve one's stress management skills.

3811

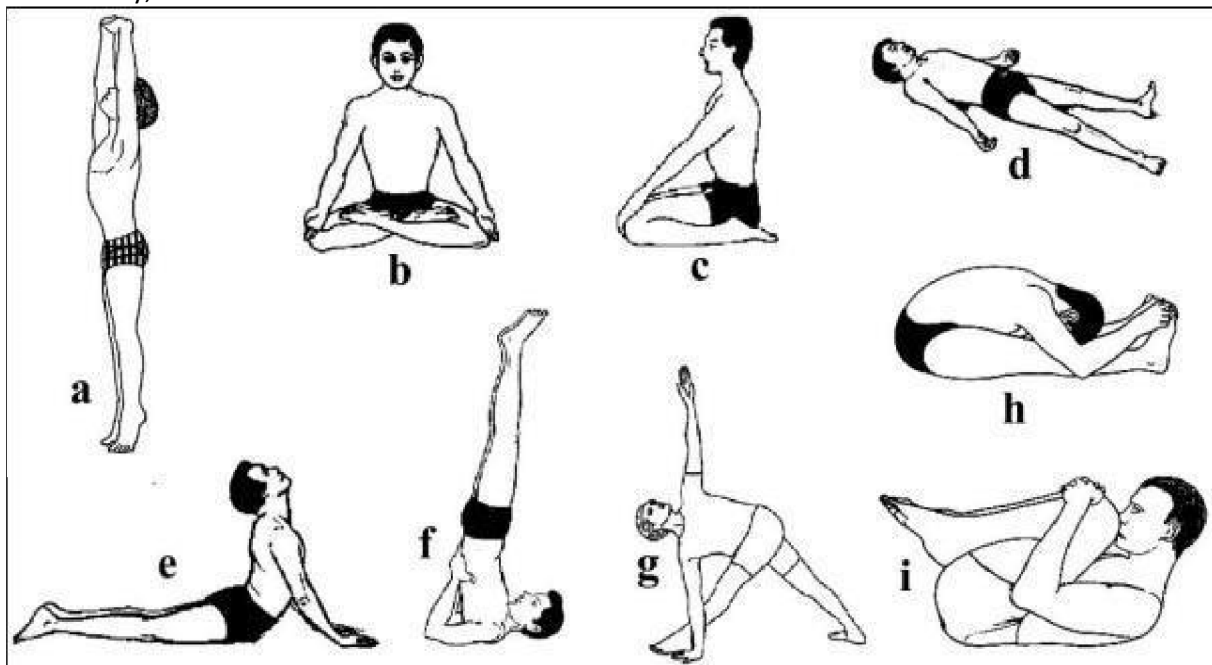


Fig. 1: Numerous Popular Asanas (Postures) a) Astana; b) Padmasana; c) Vajrasana; d) Shavasana; e) Bhujangasana; f) Sarvangasana; g) Trikonasana; h) Paschimottanasana; I Pawanmuktasana.



3. PHYSICAL EXERCISE

Physical exercise not only aids in weight loss and cardiovascular disease prevention, but also aids in immune function and resistance to viral infections. The immune system adapts by boosting its function in response to the type and intensity of exercise [25]. To induce immune system adaptations, it is critical to exercise at a moderate intensity, as this degree of intensity enhances antipathogenic activity in the immune system. Regular exercise can also enhance insulin sensitivity and reduce blood glucose, resulting in a health care signal intended to reduce mortality [26].

Role of Physical Education on Human Health

Curriculum, sports, but also health are implemented to promote pupils' physical growth, psychological development, muscle coordination, knowledge and comprehension, money as long (mental-emotional-sportivity-spirituality-social attitude), & physical fitness. The goal of education is to educate students, so students are given learning subjects. In other phrases, education focuses more on school clubs with the goal of achieving learning objectives through a set of cognitive, affective, and psychomotor factors. Physical education is a significant educational tool. Sex ed must be administered precisely and appropriately in order to obtain the institution's overriding educational goals. In addition, physical education is required at all levels of education, from school to high school & college, since it is an essential element. Physical education is a component of the educational process as a whole. Physical Policy aims to promote physical, mental, emotional, and personal fitness through all physical activity. Consequently, physical activity aims to develop individuals on biological, neuromuscular, cognitive, and emotional levels. Moreover, the role of the teacher as a motivator & facilitator is crucial [28].

Benefits of physical exercises

Physical activity helps to excellent health by preventing a variety of chronic diseases and disorders, including cardio - metabolic diseases, cancer, osteoarthritis, bone strength, and mental wellbeing [32,33]. The positive effects of physical activity on health have been illustrated across a spectrum of physical activity intensities & types [32].

4. LITERATURE REVIEW

Nathiya & Ramesh (2017) [3] assessed the effects of various yoga on blood glucose levels in obese schoolboys. The statistical significance for testing the 'F' ratio derived from analysis of covariance was set to 0.05, which was deemed adequate, according to the study's findings. Post-testing found a significant difference between the three groups' mean blood sugar levels. When tested, the post-adjusted actually imply of the 3 parts also predicts the aforementioned result.

Brenes (2018) [22] described of a comprehensive assessment of the evidence available regarding the benefits of yoga for dementia sufferers and cognitive deficits. They concluded that yoga seems to have the potential to become an important non-pharmaceutical intervention for cognitively impaired patients after analysing 6 trials which it demonstrated significant mood and behaviour changes in this population. As a direct consequence, I have removed this topic from such a work and directed readers who are interested to their website. Park et al. (2020) assigned 31 dementia patients randomly to one of 3 parts: chair tai chi, therapy, or control. Life quality improved in the seat yoga group, and not in other areas, including functional ability, mood, or behavioural problems.

Villemure and colleagues [23] examined if the correlation exists between age and the total amount of GM in the brain differed between yogis and non-practitioners. In a sample of diverse individual people without tai chi experience, there was a bad correlation or rather total GM brain volume. However, there was no relationship between social and structure of the brain in a group of meditators. The slope clear difference, however, was not



statically important. In none of these studies did Pro have larger or bulkier brain regions than experienced yogis.

Garner and colleagues [24] studied the impacts of yoga on GM density, which really is approximately equal to the wifi signal of a voxel or rather reflects the amount of gray matter volume contained in each voxel. After a ten-week interference in which attendees self-selected between Hatha yoga, sport regulate, and passive control groups, they investigated the changes in GM density in good health young adults. Despite the fact that both the yoga as well as sport control groups involved in 10 hours of once a week practise consisting of comparable physical motions, a sport control firm's practises did lack the themeitation and breath components of detailed yoga. 4. Unlike the individuals in these clusters, who had avoided their preferred activity for at least six months prior to the intervention, those in the inactive control group continued to engage in their usual activities. There were no big variation between the yoga group and the passive control group, but there were significant differences between the yoga group and the athletics group.

Elumalai and Venkatachalapathy (2017) [29] investigated the effect of yoga on vo2 max and anxiety in middle-aged men. According to the study results, yoga gradually improved tidal volume and reduced anxiety. In terms of vital capacity and anxiety, there was a significant difference between the tai chi practise control treatment and the yoga practise condition.

Engarsal and Duraisami (2017) [30] conducted exploratory research into the association between back pain in yogis as well as non-yogis and particular lifestyle factors. The selected yoga practise techniques group had such a statistically meaningful (P 0.05) impact on anger & pulse rate levels compared to the control group.

H. Carmer et al. (2015) [31] investigated this same effect of yoga on the menopausal symptoms of breast cancer survivors. Yoga and meditation were evaluated as a safe and effective complement for women with a history

with menopausal symptoms.

- **Impact of air pollution levels on physical activity behavior**

An et al. (2019) [27] reviewed subsequent evidence on the impact of polluted air on health - related behaviors in China. Interventions or experiments, retrospectively and prospectively cohort studies, cross-sectional studies and case-control studies were all used as study designs. Although the search terms covered research from all LMICs, only Chinese studies were identified. Six of the 10 studies that met inclusion criteria were cross-sectional in nature, while four were prospective cohort studies. Four of the studies examined a single air pollutant, while six examined total air quality using the Air Quality Index. Overall air quality degradation and a rise in PM2.5 concentrations were shown to be associated with decreased daily/weekly duration of outdoor leisure time and/or transportation-related physical exercise such as walking, running, and biking. In comparison, evidence associating poor overall quality of the air and elevated PM2.5 concentrations to sedentary lifestyle, such as watching television, remained inconsistent and inconclusive. In conclusion, An et al. (2019) urged for future research to evaluate the impact of air pollution on vulnerable populations such as children, frail older persons, and residents of LMICs using objective measures of physical activity and longitudinal/experimental designs.

CONCLUSION

The review of the literature reveals that yoga is a safe complementary and alternative therapy that can be used to improve one's general quality of life and specific ailments without causing adverse effects. The findings indicate that when therapeutic yoga is used, patients' problems such as anxiety, sadness, stress, insomnia, and emotional condition improve. Diverse types of yoga treatments, duration, exposure practise, and indications are reflected in the heterogeneity of yoga-related research. Yoga is beneficial for improving fitness in both normal and infected populations, but cancer



patients should be approached with caution due to their illness. The increasing popularity of yoga is due to its positive effects on personal health. Yoga has been utilised as a thorough relaxation technique since antiquity, and it has been demonstrated to be effective against hypertension, obesity, anxiety, insomnia, and ageing. Yoga is safe and provide several health benefits to professionals, irrespective of age, overall health, or desire for just a therapeutic approach to assist people in handling a chronic condition, according to the majority of available research.

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