

# Role of Yoga in Reducing Stress of Students

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**Abstract:** *Yoga is being utilised more frequently in professional settings for a variety of mental and physical health difficulties, notably stress-related illnesses and concerns, and has shown to be effective. However, the mechanisms by which yoga decreases stress remain a mystery. We did a systematic assessment of the literature, encompassing any yoga intervention that measured stress as a primary dependent variable and tested a mechanism of the association with mediation, to examine the empirical data about the mechanisms via which yoga reduces stress. Yoga has been demonstrated to influence the link between stress and positive affect, self-compassion, inhibition of the posterior hypothalamus, and salivary cortisol. Although the literature explaining probable pathways is quickly expanding, only seven mechanisms have been empirically investigated; further research is needed. Future research should also include more rigorous technique, such as enough power, study randomization, and appropriate control groups.*

**Keywords:** Yoga; Stress Reduction; Mindfulness; Clinical Interventions; Methodology

## I. INTRODUCTION

Animal studies were used by Walter Cannon and Hans Selye to provide the first scientific foundation for the study of stress. They studied animal physiological reactions to external stresses such as heat and cold, protracted immobilisation, and surgical operations, and extrapolated these findings to humans. Richard Rahe and others established the concept that stress is induced by unique, measureable life stressors, and that these life stressors may be ranked by the median degree of stress they produce in subsequent studies of stress in humans (leading to the Holmes and Rahe Stress Scale). As a result, stress was once thought to be the result of external insults beyond the control of those who were experiencing it. However, it has lately been proposed that external conditions do not have an inherent capacity to cause stress, but rather that its impact is mediated by an individual's perceptions, capacities, and understanding.

Stress is a natural physiologic reaction to situations that make you feel threatened or throw you off balance. When you detect danger, whether real or imagined, your body's defences go into overdrive in a quick, instinctive process known as the "fight-or-flight-or-freeze" reaction, also known as the stress response. Hans Selye invented the term "stress" as we know it today in 1936, defining it as "the non-specific response of the body to any demand for change." An organism's response to a stressor, such as an environmental state or a stimulus, is referred to as physiological or biological stress. The sympathetic nervous system is activated in reaction to stress, resulting in the fight-or-flight response, according to the stressful event. The body can't stay in this state for long, therefore the parasympathetic system kicks in and restores normal physiological conditions. Stress is a term used to describe a negative or positive condition that can affect a person's mental and physical well-being in humans.

It is a well-known truth that science and technology have made a significant contribution to increasing people's living standards all around the world. Science and technological advancements have been accompanied by some drawbacks in recent years.

It is improving at a rapid pace in certain countries, while it is slowing in others. It is commonly recognised that as people's material prosperity increases, so does their mental tension and pressure. Stress and pressure are prevalent among university students who want to reach the limits of the sky. We can look for the solution in our cultural heritage.

Yoga has a long and illustrious history. It is the culmination of thousands of years of diligent observations and personal experiences by a long line of sages and yogis. Yoga is one of the most important spiritual legacies that ancient Indian sages have left to humanity.

Yoga is a spiritual discipline that focuses on bringing mind and body into harmony. It is based on a very subtle science. It is both an art and a science to live a healthy lifestyle. The name 'Yoga' comes from the Sanskrit root 'Yuj,' which means

'to join, yoke, or unify.' Yoga, according to Yogic texts, leads to the union of individual consciousness with that of the Universal Consciousness, implying complete harmony between the mind and body, as well as between Man and Nature. Everything in the universe, according to current scientists, is only a manifestation of the same quantum firmament. A yogi is someone who has experienced this oneness of existence and has gained the state of freedom known as mukti, nirvana, or moksha. As a result, the goal of Yoga is to achieve Self-realization, which leads to 'the state of liberation' (Moksha) or 'freedom' (Kaivalya). Yoga practise should emphasise living with freedom in all aspects of life, as well as health and harmony. "Yoga" also refers to an inner science that includes a number of techniques for realising this union and gaining control over one's fate. Yoga, commonly regarded as a 'immortal cultural result' of the Indus Saraswati Valley civilization, which dates back to 2700 B.C., has proven to be beneficial to humanity's material and spiritual well-being. Yoga Sadhana's very identity is based on basic humanitarian values.

## **II. STRESS MANAGEMENT THROUGH YOGA**

Yoga has been shown to help with stress management through a variety of ways. These strategies act on both an individual and a communal level to provide great relief from the situation of excessive stress. They assist in alleviating the problem's bodily and psychological negative effects by guaranteeing a healthy and constructive reaction to stress stimuli. Yoga has been shown to have a beneficial effect on the parasympathetic nervous system, which can help to lower heart rate and blood pressure. The body's demand for oxygen is reduced as a result. Yoga can also aid with digestion, immunity, and the efficient elimination of harmful wastes, as well as increasing lung capacity. This technique can also help to lessen the likelihood of stress leading to anxiety and despair.

Yoga consists of a variety of physical postures, gentle stretching movements, breathing techniques that can lead to progressive relaxation, imagery, and meditation. All of these strategies have a specific purpose and lead to a greater understanding of what is occurring to oneself during times of stress - emotionally, physically, cognitively, and energetically. By becoming more conscious of each component of the body, one can gain a better comprehension of it. The approach entails paying close attention to each and every component, resulting in a complete treatment.

The first step in the exercise is to become conscious of the stressful stimuli so that you know what you're up against. Recognizing the opponent is crucial in warfare, and similarly, understanding the variables that produce stress can assist you in determining how to deal with it. Yoga teaches you how to control your natural and immediate responses to stress. Psychological responses can also be learned with practise. This means that when a stressful circumstance arises, the body's previous reflexes that put it on alert or alarm do not take control.

And as a result, no matter what problems you confront, you remain calm, composed, and capable of dealing with the issue with a level mind. Almost everyone is affected by this extreme word. People from all walks of life experience stress in some form or another. In this essay, I'd want to discuss the origins of stress and how to treat it using a natural therapy called YOGA. But, before we get to that stage, we need to know exactly what is causing the stress. Stress is mainly a mental strain brought on by exhaustion or too much effort. Worrying over job or events from the past, present, or future might also cause it. Consider a businessman who exports his products to several countries; his business is doing well and growing; however, a situation arises, and he discovers that his business is declining; there may be a reason for this, and it may be temporary, allowing his business to bloom again; however, within this short time frame, the person develops stress, which may lead to severe mental hazards.

## **III. EFFECT OF YOGA ON STRESS:**

Yoga is an old Indian science, and several studies have shown that yoga and pranayama can help people cope with stress. Pranayama is the practise of manipulating the breath, which serves as a dynamic link between the body and the mind. Puraka (inhalation), kumbhaka (retention), and rechaka (exhalation) are the three phases of pranayama, which can be done quickly or slowly. Pranayama is a highly significant part of Maharishi Patanjali's Ashtanga Yoga, and it is thought to be far more important than yogasanas for maintaining good health. Both fast and slow pranayamas have been demonstrated to be effective in previous research, although they cause differing physiological circulatory reactions in healthy participants. Slow breathing techniques like Nadishuddhi, Savitri, and Pranav have been demonstrated to lower heart rate, systolic blood pressure (SBP), diastolic blood pressure (DBP), and increase pulse pressure (PP). There are limited studies on the effects of doing fast pranayamas. Fast pranayamas like Kapalabhati and Bhastrika have been shown

in some studies to increase sympathetic activity and so raise HR, SBP, and DBP when done alone, while others have shown that they decrease sympathetic activity and hence decrease HR, SBP, and DBP. After 12 weeks of practise, other research found no effect of fast pranayama. Perceived stress has been demonstrated to have a deleterious impact on cardiovascular function by increasing blood pressure (BP) and decreasing cardiovascular responsiveness in participants in previous research. There is no study that compares the cumulative effect of fast and slow varieties of pranayama on perceived stress and cardiovascular markers in health-care students that we are aware of. As a result, we've decided to compare three regularly practised rapid (Kapalabhati, Bhastrika, and Kukkuriya) and slow (Nadishodhana, Savitri, and Pranav) Pranayamas on these factors. Meditation, yoga, hypnosis, imagery, muscle relaxation, and other stress management techniques for students have demonstrated to boost their positive coping skills.

#### **IV. CONCLUSION**

One of the primary causes of disease is stress. Stress can cause medical problems like sleeplessness, chronic muscle tension, digestive problems, ulcers, high blood pressure, and heart disease if it is not managed properly. Memory loss, inability to concentrate, anxiety, aggression, and depression are some of the mental and emotional repercussions. Yoga encourages the mind-body connection to be healthy. Yoga encourages people to slow down and enjoy all elements of their lives, including their physical, emotional, mental, and spiritual selves. Yoga, in fact, integrates a number of stress-relieving approaches. Yoga combines a variety of advantages in one discipline, including breathing exercises (pranayama), stretching exercises, a fitness programme, meditation practise, and guided meditations. This guy can gain a lot of benefits from yoga just by doing it. Finally, yoga may be a fantastic stress reliever and a great therapy for stress.

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