

Yoga as Physical Therapy Intervention and Future Direction for Yoga Research

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Introduction

Yoga has been practiced in India for thousands of years and it is spreading all over the world due to its benefits on various bodily structures and functions. The ultimate goal of Yoga is to attain balance between mind and body for a joyous and a healthy lifestyle. Numerous researches proved that there are immense benefits of Yoga for people irrespective of religion, race, age, and origin [1]. Human lifestyle is transforming constantly due to change in the environment of stressful living. Since the beginning of the 20th century, the western world has adapted a busy and stressed lifestyle. These stressful situations lead to physical, mental, and emotional imbalances in an individual due to changes in hormonal and sympathetic responses. Therefore, we need some form of balancing method to alleviate the distress we encounter in our lives. Yoga can provide a way to prevent and help individuals attain healthy living without any pharmacological interventions and dangerous side effects of medicine and surgery. Yoga can prevent and heal certain musculoskeletal conditions, if it is followed with utmost caution [2].

Yoga constitutes meditation, yoga postures, and pranayama (breathing exercise) to name a few. Scientifically proven benefits can be attained through proper methods of teaching and learning of Yoga. Performing regular Yoga affects major systems of the body, for example, nervous system, muscular system, and cardiorespiratory system. These systems are interdependent and play a significant role in our daily physical, mental, emotional, and social well-being. For example, practicing pranayama initially affects the respiratory system and associated anatomical structures. Eventually, it will enhance the respiratory centers in the medulla and pons. The long-term effect of pranayama is on the brain rather than just the lungs. Therefore, benefits of Yoga improve the efficiency of various systems allowing mind and body to function as a whole. Most Yogic practices are performed to improve physiological and psychological functioning of the body. It has been demonstrated that Yoga affects mainly the parasympathetic nervous system and release of hormones that are necessary for proficient functioning of various systems. Parasympathetic nervous system directs homeostasis centers in the body to alleviate the harmful effects of sympathetic responses of the body so that other systems can function smoothly [3]. In recent years, Yoga has been introduced in physical therapy interventions benefitting postural misalignments, muscle imbalances, range of motion problems, and strength development of different muscle groups. Breathing exercises with proper techniques would help to improve patients with respiratory and cardiac disorders. Postural misalignments can be corrected by performing various yoga postures. In the United States, physical therapists are using Yoga exercises and Yoga breathing techniques to control pain, musculoskeletal disorders, postural imbalances, and improve range of motion. Patients find that Yoga is beneficial and improves overall functioning of the body. Moreover, Yoga has been introduced as part of the physical education curriculum in schools in the United States. It has been established that students who participated in Yoga classes had better physical, mental, and emotional attributes [4].

Several researchers have shown that Yoga exercise interventions

are beneficial to patients after having a stroke leading to improved physical function. Yoga breathing exercises are very helpful for patients with multiple sclerosis (MS) to alleviate the harmful effects of fatigue, body temperature control, and depression. It is quite obvious that an improved and efficient breathing pattern provides better oxygen supply to the muscles and control fatigue of individuals with MS. There is evidence that pranayama breathing exercises will help to control weight gain and obesity in teens. This may be due to the fact that people who participate in Yoga exercises may feel energized and eat fewer calories. Of course, diet and caloric intake are some of the main concerns associated with obesity. The changes in the hormonal release by doing Yoga will guide to improved sympathetic control of the nervous system. Other researchers have shown that regular Yoga exercises improve flexibility, vital capacity, and cardiovascular endurance, range of motion, balance, and pain tolerance. Therefore, we must do Yoga exercises, pranayama, and meditation to prevent ill effect of modern day stressful life for at least 20-30 minutes/day to feel energized every day [5].

Physical therapists must be aware of the benefits and limitations of Yogic exercises on musculoskeletal conditions. Yoga programs must be modified and adapted to the needs of an individual with disability. Therapists should be very observant of patients while doing those exercises. An incorrect exercise may lead to adverse effects and may exacerbate the present condition. A physical therapist must be trained and certified to be a Yoga instructor. Moreover, physical therapists must engage in writing case reports regarding benefits of Yoga exercises used with patients.

Finally, there is a need for increased research to provide evidence to the positive effects of Yoga on certain pathological conditions we may acquire due to our busy lifestyle, work, diet, habit, injury, and exercise. Research and publications in the area of benefits of Yoga are still growing, but strong evidence-based research is recommended in the future. Therefore, we need to encourage new investigators to participate and conduct controlled clinical trials on benefits of Yoga on physical therapy interventions and its healing effect. Furthermore, these investigations must be disseminated to others through publications in refereed journals.

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