



Importance of Yoga and Exercises on Physical Physiological and Psychological Health in B.Ed. Students

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Abstract

The purpose of the study was to through light on the importance of yogic exercises on physical, physiological and psychological health in B.Ed. students. To improve physical health, mental health, fitness, and quality of life yogic exercise and physical workout is most important. Physical exercise has the ability to improve one's quality of life since it maintains the muscle, joints, and tendons moving. Blood pressure can also be controlled by exercise. Hemoglobin's performance was found to be greatly enhanced in groups participating in physical exercise or yogic practice. Physical exercise and yoga practice have been shown to have a substantial impact on performance. Yoga practice should be included in the Education curriculum for students in higher education institutions.

Key words: Yogic-Exercise, Muscle, Psychological Variables.

1. Introduction:

Yoga is an ancient science of physical, mental and spiritual development. As a form of physical fitness training and exercise, yoga is becoming increasingly popular in Western societies. Yoga is the best way to cultivate balance between the physical, mental, and spiritual levels. Yoga asanas are postures in which the body is moved and/or held in various positions. There are numerous yoga asanas, or postures, that can be used to improve one's physical and mental well-being. These postures (exercises) can be used in a variety of ways and are designed to gently stretch and explore the entire body. Practicing yoga asanas improves physical fitness by increasing stamina, strength and flexibility while also increasing blood flow, posture and muscular tone. It also improves focus and self-control.

"To join or yoke" is the literal meaning of the term "yoga." It harmonizes the physical and mental aspects of one's being. Yoga aids in the development of a person's physical, mental, and spiritual well-being. "Mind, Body, and Spirit" are the three components of yoga. Yoga is a practice with historical origins in ancient Indian philosophy.

For over 4,000 years, yoga has its roots in India. The ultimate goal of yoga is to bring one's body, mind, and soul into harmony. Asanas, pranayama, and meditation are all part of yoga practice. Pranayama is a breathing technique that teaches the mind how to relax by focusing on the breath. It stimulates the parasympathetic nervous system (PNS) and induces a state of mental relaxation. Increased blood flow and oxygen delivery, digestion, range of motion in the joints, and decreased heart rate are all effects of activating the parasympathetic nervous system (PNS). Breath holds time is a measure of a person's capacity to hold their breath for an extended length of time without inhaling or exhaling. It is the number of breaths taken in a minute, or the number of inspiration and expiration.

Six Branches of Yoga:

1. Hatha Yoga or Yoga of Postures.

Most people have heard of Hatha Yoga because it is the most widely practiced kind of yoga. Asanas, Pranayama, and Meditation are all part of this discipline of yoga, which aims to improve one's health and spirituality at the same time. Many different forms of yoga exist within this discipline, including Integral, Ashtanga, Kripalu, and Jivamukti. In order to achieve both mental and physical well-being, Hatha yoga may be the way to go.

2. Bhakti Yoga or Yoga of Devotion.

In India, Bhakti Yoga is the most popular kind of practice. Taking this route is a matter of the heart and soul. This branch of yogis recognizes the "one" or the divine in everyone and everything, and they practice this branch of yoga. Bhakti Yoga is a spiritual path that focuses on cultivating unconditional love and acceptance of all things in order to cultivate devotion to the "one," or Brahma.

3. **A type of yoga known as Raja Yoga, or yoga of Self-Control.** The word "raja" implies "royal." The fact that most of its adherents belong to religious or spiritual orders may explain why this route is regarded as the king of all of Yoga's paths. According to the Raja yoga sutras, Raja Yoga is based on the eight limbs of yoga. It is important to treat oneself and all of creation with respect as a Raja yogi regards the self as the centre of everything. They gain esteem for themselves by first becoming masters of their own psyches. Raja Yoga is an excellent method for developing self-control and self-discipline.
4. **Jnana Yoga or Yoga of the Mind.**
The path of yoga that primarily deals with the mind and so emphasizes human intelligence is known as yogic. For Jnana Yogis, wisdom and intellect are equally vital, and their goal is to bring them together in order to transcend constraints. They believe that an open and reasonable mind is essential to understanding the spirit, which is why they are open to other ideologies and religions.
5. **Karma Yoga or Yoga of Service.**
The path of service is known as Karma Yoga. After all, according to this school of thought, one's current circumstances are a direct result of his or her past behaviour. As a result, one is selecting a future that is free of negativity and greed by performing selfless service now. Karma yogis modify their outlook on the positive and hence change their souls, which results in a change in their future.
6. **Taoist Tantra Yoga, or Tantric Yoga.** Tantra Yoga is perhaps the most misunderstood of all the systems. It is about using rituals to feel what is scary.

Objectives

To know the importance of yoga and exercises on physical, physiological and psychological health in B.Ed. Students.

REVIEW OF LITERATURE

Yoga's primary therapeutic effect is on the body and mind. "Yoga" and "physical exercise" are extremely important in India, not only for the prevention or treatment of physical disorders or diseases but also to maintain physical fitness. Also, physical fitness was highly valued by the ancient Rishis, Vedas and Purans (Uppal & Gautam, 2006).

Physical education students were investigated by Sunil Rayat in 2015[12] to see if yoga has an impact on their physical and physiological health. Study participants were B.P. Ed. And B.Ed. students who participated in a series of yoga asanas and pranayama exercises to examine their physical and physiological responses to the practice. A total of 40 male students from the SGGS Khalsa College in Mahilpur, Punjab, India, were chosen as subjects for this study. They were between the ages of 18 - 24. 12 weeks of yogasana and pranayama training were given to students. Several measures of physical fitness, such as trunk strength and endurance, as well as physiological parameters including pulse rate, vital capacity, and peak flow rate were found to be improved with frequent practice of yogasana and pranayama in this study. 30% of young people in India, a country with a diverse population, are affected by the negative impacts of hopelessness. In this post, we'll focus on how yoga can be a helpful tool for managing stress. It's polished to put pressure on Chief executives, as well as to promote fantastic physical and mental health and to help people live more meaningful lives (Bussing et al., 2012).

When dealing with high levels of stress, executives may find that engaging in a variety of activities, including yoga, is beneficial. Yoga programmes that are consistent with current ideas to increase well-being can be supported to deal with stress. There may be times when a therapist or other medical service provider can help alleviate the tensions that cause persistent and intense roundabout pressure in a person's life. It's been shown that activities like athletics, yoga, and other forms of physical activity are quite beneficial for preparing oneself to relax. More rational and orderly techniques exist in addition to these well-known strategies. Deliberate unwinding of the muscles is one of these methods. This strategy relies on the belief that psychological unwinding follows solid unwinding (Collins, 1998).

In spite of the fact that yoga may not completely remove genuine illnesses or possibly harmful diseases from the body in terms of their removal from the body, it provides people with an ageless and all-encompassing model of well-being and mending. Yoga's stated goal of promoting inner peace and harmony is inextricably linked to a person's whole physical and

psychological well-being. By consciously acting, we are able to slow down the changes in our mind and hence live better and with less suffering (Miriyala, 2011, Sharma, 2017).

ASPECTS RESPONSIBLE FOR THE PHYSICAL, PHYSIOLOGICAL AND PSYCHOLOGICAL HEALTH IN B.ED. STUDENTS

A. Physical Parameters

1. **Body Mass Index:** It is an inexpensive and easy method of screening the physical health of an individual via the person's weight and height, which is categorized as underweight, healthy weight, overweight, and obesity. This method doesn't measure body fat directly, but it is moderately correlated with more direct measures of body fat.
2. **Blood Pressure:** An obese person has many more blood vessels than a lean person, a situation that can cause high blood pressure since the heart has to work harder. The tone of smooth muscle fibres in the walls of blood vessels plays a crucial role in maintaining blood pressure. Angiotensin II which is a Neuropeptide, stimulates thirst and may regulate blood pressure in the brain. The Glossopharyngeal (IX), a mixed sensory cranial nerve, monitors blood pressure and oxygen & carbon dioxide levels in blood.
3. **Respiration Rate (Breathing):** Oxygen, which is 65% of total body mass, it has very much significance in the human body. Oxygen which is a part of water and many organic (carbon-containing) molecules of the body; is highly used to generate ATP, a molecule used by cells to temporarily store chemical energy.
4. **Pulse Rate:** The pulse rate normally is the same as the heart rate, about 70 to 80 beats per minute at rest. Tachycardia is a rapid resting heart or pulse rate over 100 beats/minute. Bradycardia is a slow resting heart or pulse rate under 50 beats/minute.
5. **Body Temperature:** When your body temperature drops sharply, your brain (control center) sends nerve impulses (output) to your skeletal muscles (effectors). The result is shivering, which generates heat and raises your body temperature. In newborns, Brown Adipose Tissue (BAT) generates heat to maintain proper body temperature. The hypothalamus also functions as the body's thermostat, which senses body temperature.
6. **Waist Circumference:** It is one of the dangerous facets of the overall health of humans, Obese children have a tendency to get unhealthy in a very easy way. Different organizations like World Health Organization, International Diabetes Federation, American Heart Association, and many more are continuously spreading awareness about this serious concern.

B. Physiological Parameters

1. **Percentage Body Fat:** The amount of fat varies from person to person, corresponds to the general extent of body fat in an individual[ix], and typically increases with age. In the 26–29 weeks of the baby in the womb, the body fat is 3.5% of total body mass and additional subcutaneous fat smoothes out some wrinkles; while in 30–34 weeks the body fat is 8% of total body mass and in 35–38 weeks the body fat is 16% of total body mass.
2. **Blood Serum Cholesterol (BSC):** It is directly associated with the health of the heart[x], by taking the blood sample LDL (Low-Density Lipoprotein), HDL (High-Density Lipoprotein), and TG (Triglycerides) are measured. This parameter has a severe impact on health which occurs due to poor diet and a sedentary lifestyle.

C. Psychological Parameters

Neuropeptides have also been linked to improved memory and learning; feelings of pleasure or euphoria; control of body temperature; regulation of hormones that affect the onset of puberty, sexual drive, and reproduction; and mental illnesses such as depression and schizophrenia. Several physiological changes occur during NREM sleep. There are decreases in heart rate, respiratory rate, and blood pressure.

1. **Depression:** Depression is a disorder that affects most people in their whole life, people who are depressed feel sad and helpless[xi], have a lack of interest in activities that they once enjoyed, and experience suicidal thoughts. For instance, some people may be depressed because of biological imbalances in neurotransmitters in their brains. As a result, the biological determinants of depression become intertwined with the social responses of other people, making it difficult to disentangle the effects of each cause.

2. **Anxiety:** The intense, excessive, and persistent form of worry, fear, shock, excitement, mental fatigue, loss, and grief turns an individual into a form of Anxiety. Anxiety may slow digestion because it stimulates the sympathetic nerves that supply the Gastrointestinal (GI) tract.
3. **Stress:** The exact role of stress in human diseases is still unknown, but it is very clear that stress can lead to particular diseases by temporarily inhibiting certain components of the immune system. Stress-related disorders include Gastritis, Ulcerative Colitis (UC), Irritable bowel syndrome (IBS), Hypertension, Asthma, Rheumatoid arthritis (RA), migraines, Headaches, Anxiety, and Depression. People under stress are at a greater risk of developing chronic diseases or dying prematurely.
4. **Quality of Life:** The term 'Quality' always makes an arrangement of comfort and happiness in the subjective assessment. In this issue, Quality of life is checked for the level of life satisfaction viz. financial, social, academic, relations, and many more.

IMPORTANCE OF YOGA:

Yoga's role in education from a variety of perspectives, including the sort of education that was being delivered to children around the world as well as the diverse degrees of stress that children endure in the classroom environment.

- *Adjusting Both Hemispheres of the Brain:*

The right and left hemispheres of our brain, according to science, are divided. Both hemispheres of the brain have distinct roles. Linear, logical, and intellectual processes are the domain of the left hemisphere. People with a dominant right hemisphere brain are more artistic, imaginative, and intuitive than those with a dominant left. It's clear that our educational system doesn't allow children to maximize their right and left-brain development. We encourage children to develop their artistic abilities, whether it's through music, painting, or acting. Let their imaginations go wild! Linear and logic are more prominent than art and creativity when comparing brain lobes, but this doesn't mean that they're not important.
- *Flexibility:*

New forms of stretching will help your body become more flexible, allowing you to move more freely through your muscles and joints. Flexibility in the hamstrings, back, shoulders, and hips should improve with practice.
- *Strength:*

We must learn to support our own weight in novel ways when doing yoga positions like tree pose, which requires us to balance on one leg or use our arms to support our weight. In addition to increasing our strength, several exercises require us to move gently in and out of positions.
- *Muscle tone:*

Gaining muscle mass is a natural effect of strengthening your muscles. Muscles that are long and lean can be developed with the help of yoga. Increased range of motion in muscles and joints can be achieved by stretching a stiff body in different ways. There are many muscles that get more flexible with time, including the hamstrings, back and shoulders.
- *Reducing stress*

Yoga, in particular, has been shown to be beneficial in reducing stress, and physical activity in general. Because of the meditative nature of yoga, all of one's worries, big and small, seem to fade away throughout the practice. When you're dealing with a lot of stress, it's important to take a break. We can alleviate stress by focusing on the here and now rather than worrying about the past or imagining the future. After a yoga session, one will feel less anxious than before.

2. Discussion:

Today's life is full of stress and stress has been subjected to perhaps the most rigorous examination in the history of mankind. Due to hectic lifestyle and competition in work place everyone is suffering from physical, physiological and psychological problems. Even though millions of dollars have been spent on improving the executives' programme to handle these problems, we haven't even come close to tackling the problem.

Now a days children focus on grades, test scores, awards, and other external markers of success, that's why they can lose sight of their inner identity. Yoga and physical exercise will help to maintain all such parameters in a very kind manner for the future perspective of life.

3. Conclusion:

Even though it was just for a short time, the yoga practice proved effective in promoting well-being and social engagement. Physical exercise and yoga practice have been shown to have a substantial impact on explosive strength performance. The findings aid in the recognition of yoga as a viable educational tool for children's long-term growth. It's also critical to stress that yoga for kids should be approached with a joyful attitude and include exercises that address each stage of the child's growth and development. A school's academic programme can be improved by integrating yoga to the curriculum as a supplement to regular physical education subjects. The importance of yoga in athletics is just as great as some people assume, and it assists us in a variety of ways. A sportsperson's ability to perform at their best may be enhanced via the development of mental agility and focus through the practice of yoga. A good foundation for a healthy life can be built by allowing children and adults to experience success in physical activity. Yoga education faces a number of unique obstacles both in the classroom and in the real world, which curriculum specialists, teachers, trainers, and students should be aware of. Practicing Yoga can positively affect your mood, behaviour and overall mental health in various ways. For students or working professionals, daily Yoga practice brings increased concentration, relaxation and peace of mind, helps to relieve symptoms of anxiety, stress, and so on.

4. References:

1. Babu, k sekar and kulothungan P.(2011) Effect of yogic practices on selected physiological variables of men hockey players, Recent trends in yoga and physical education vol .I
2. Balaji PA, Varne SR, Ali SS. (2012). Physiological effects of yogic practices and transcendental meditation in health and disease. North American Journal of Medical Sciences, 4(10), 442-448.
3. BeotraAlka, (2000), Drug Education Handbook on Drug Abuse in Sports. Delhi: Sports Authority of India
4. Black et al. (2017). Physiological health parameters among college students to promote chronic disease prevention and health promotion. Preventive Medicine Reports, 7, 64-73. <http://dx.doi.org/10.1016/j.pmedr.2017.05.006> [
5. Chibber S. K. (1999). Guidance and Counseling. Common Wealth Publishers, New Delhi
6. Chidambararaja .S.,(2015) Effect of yogic practice and aerobic exercises on Resting pulse rate and Blood pressure among school boys, International education e journal, iv (1)1-5
7. Cited from <https://timesofindia.indiatimes.com/astrology/others/cosmos-in-our-body/articleshow/68207123.cms> Accessed on 08/07/2023
8. Cited from <https://www.actionforhealthykids.org/activity/yoga-and-mindfulness/> Accessed on 05/07/2023
9. Cited from <https://www.healthline.com/health/serum-cholesterol#treatment> Accessed on 12/07/2023
10. Cited from <https://www.hsph.harvard.edu/obesity-preve>
11. Cited from <https://www.mayoclinic.org/diseases-conditions/anxiety/symptoms-causes/syc-20350961> Accessed on 13/06/2023
12. Cited from <https://www.who.int/news-room/fact-sheets/detail/depression> Accessed on 26/05/2023
13. Fatemeh et al. (2021). Health related quality of life and psychological parameters in different polycystic ovary syndrome phenotypes: a comparative cross-sectional study. Journal of Ovarian Research, 14(57), 1-9 <https://doi.org/10.1186/s13048-021-00811-2>
14. Harinath, K. et.al. (2004).” Effects of hatha yoga and omkarmeditation on cardiorespiratory performance, psychologic profile,and melatonin secretion”.The Journal of Alternative and Complementary Medicine.10:2:261-268.
15. Introduction to yoga: A beginner's guide to health, fitness and relaxation. New York, NY: Three River Press.

16. Kumar, (2012). "Comparative Study on Trends of Psycho, Physical and Physiological Variables of School and College Level Taekwondo Players, International Journal of Research in Social Sciences and Humanities vol. no. 1, issue no. iv, April–June.
17. Mishra Anshuman (2014), Comparison of selected sports specific psychomotor abilities between batsmen and bowlers in cricket, ISSN 2278 – 8808
18. Rocha, K.K.F. et al. (2012). Improvement in physiological and psychological parameters after 6 months of yoga practice. *Consciousness and Cognition*, 21, 843–850. <http://www.sciencedirect.com/science/journal/10538100>
19. Sharma, G. (2017). Yoga for stress management among youth. *International Journal of Physical Education, Sports and Health*, 4(5): Part-A, 01-03.
20. Sivananda, S. (1995). *Practice of Karma Yoga*. A Divine Life Society Publication, Dist. Tehri-Garhwal, Uttaranchal, Himalayas, India.
21. Sunil Rayat (2015) Effect of yoga on selected physical and physiological variables of physical education students *international journal of sports and physical education* vol -ii (4) 18-24.
22. Uppal ,A.K. &Gautam, G.P.(2006). *Physical Education and Health*.NewDelhi : Friends Publication
23. Yadav,R.K.& Das, S.(2001)." Effect of yogic practice on pulmonary functions in young females".*Indian Jl. PhysiolPharmacol*.45:4:493-496.
24. *Yoga games for children: Fun and fitness with postures, movements and breaths*. California: Hunter House Finger, A. (2000).

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