

CLINICAL APPLICATIONS OF YOGA TO ENHANCE ETHICS IN MEDICAL EDUCATION

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ABSTRACT

Objective: The objective of this review is to enhance the appreciation of Yoga and Meditation as an ethical way of life in Medical students, Faculties and Researchers. **Methods:** Literary search, only peer-reviewed, published manuscripts were considered. **Results:** We included published studies, University Medical Education research findings of the effect of Yoga on various parameters. **Conclusion:** Yoga is the essential need of today and the culture of tomorrow. Every living being has sanctity and dignity of its own and it should be respected just like we expect to respect our own sanctity and dignity. In simple words, we should show maximum possible kindness to every living being.

KEYWORDS: Yoga, Medical education, ethics.

INTRODUCTION

The objective of Medical Education was not merely to prepare the student to earn a livelihood, but also to infuse a strong desire to lead a good and virtuous life. The importance of moral fitness is the basis of Medical Education.^[1] Ayurveda, “The Science of Life,” is the ancient wisdom science of living in harmony with each other and our environment. The Sanskrit word “Ayurveda” is composed of two words – Ayu and Veda. Ayu means „life“ and Veda mean knowledge. Yoga is one of the most extraordinary spiritual sciences that mankind has ever discovered. Yoga includes all kinds of higher education. Ayurveda is one of the most remarkable holistic medical systems in the world.^[2] Introduction of an AYUSH module in the current curriculum of MBBS (Bachelor of Medicine and Bachelor of Surgery) program“ has been proposed by Kishor Patwardhan, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University, Varanasi.^[3]

Medical school students experience a decrease in measures of idealism as they progress through their education. Additionally, as students make choices in their medical careers, such as specialty choice or consideration of primary care, the influences of job security and social status increasingly outweigh idealistic motivations.^[4]

Idealism in medicine can be defined as the pursuit of the improved quality of life and relief of suffering for all humankind, with an emphasis on the provision of medical practice that focuses on providing service-oriented, interpersonal care to underserved or disadvantaged populations, as well as a concern for the health of society as a whole. Idealism toward medical practice and patient care may be viewed as a fundamental quality for medical professionals.^[5]

What is consciousness? Waking, dreaming, and sleeping are the three states of consciousness. The oldest answer to this question comes from INDIA, almost 3000 years ago. (The Brihadaranyaka Upanishad). Consciousness is the inner light (ATMAN).^[6] Mandukyopanishad describes four states of consciousness: Jagratha (awake state), Swapna (dream state), Sushupti (deep sleep state) and Thuriya Avastha (the fourth state-non dual or thoughtless state). The fourth state is described as a state in which thoughts cease and mind is still. There will be a feeling of great Happiness or Bliss (Ananda). Patanjali, the father of Yoga, in his Yoga sutra describes the fourth state as the one in which “the individual is firmly established in his original state. In all other states, the individual identifies himself with his mind and thoughts”. That is in fourth state, an individual eliminates the limitations by his body, senses, mind, thought and reaches a thoughtless and infinite state of pure Awareness (Ramamurthi 1995).^[7]

DISCUSSION

Excellent memory, extraordinary intelligence, great academic achievement, and successful career are the dreams of every individual in this era of competition and professionalism. Medical profession, in addition to knowledge and skills, demands students to demonstrate high ethical and moral standards. Medical college faculty must educate students about ethics and morality and it should be integrated throughout medical curriculum. Medical students should be given basic ideas about Vedic dharma and the scientific aspects of Hinduism.

Human and animal experimentation were first introduced into Medical Physiology teaching in Breslaw (Wroclaw) University 1842 by Purkinjee. Problem Based Learning (PBL), imported from North America was widely adopted in various guises throughout India. Shifting the increased Teaching load away from active Research to “facilitators”, results in comprehensive loss of autonomy of the Physiologists.

In early Sanskrit medical literature there emerges through the mists of Hindu legend an eminent Physician named Charaka, who, like Hippocrates, was a great Teacher and an indefatigable writer (Puschmann, t 1889; Jelliffe, 1906). In his commentaries on the Ayurveda (c.500 B.C.) he admonishes young men who propose to study medicine to find a good Teacher-one "whose precepts are sound, whose practical skill is widely approved, who is clever, dextrous, upright, and blameless; one who knows also how to use his hands, has the requisite instruments and all his senses about him, is confident with simple cases and sure of his treatment in those which are difficult; of genuine learning, unaffected, not morose or passionate, and who is likewise patient and kind to his pupils" (Lakshmi Pathi, 1944). This is one of the earliest statements of the pupil-teacher relationship in the literature of medicine.^[8]

C. D. O'Malley., Chairman & Editor, Department of Medical History, UCLA School of Medicine, Los Angeles, California said that there is at present a great interest in the problems of Medical Education, and many Medical Schools have recently revised or are in the course of revising their curricula in an effort to solve those problems presented by Medicine's perplexing and ever changing demands. The important lesson is the fact that the present concern with Medical Education, the scrutiny and revision of training courses and methods of Teaching, do not represent a solely modern phenomenon. The problem has existed from the time of Medicine's origin. The profession of the Physician is as old as the History of mankind itself.^[9]

MEDICAL EDUCATION

Medical education is the process of identity development as a Doctor (10). Medical Education includes:

1. Didactic lectures- gold standard way of imparting knowledge
2. Reading
3. Discussions
4. Problem solving exercises

5. Learning projects
6. Demonstrations
7. Role models
8. Real life experiences
9. Audio-visual aids
10. Behavioral intervention.^[11]

An effective career in medicine requires empathy and compassion, yet the demands of a medical education increase stress and decrease students' ability to connect with patients. However, research suggests mind-body practices improve psychological well-being.^[12] Many ancient healers also practiced certain types of what today might be called Yoga and Meditation. Much later, when Medical Education was available, a healer was called a "Physician" if a University degree was held.^[13]

Today, India has the highest number of Medical Colleges in the world.^[14] Medical students often experience significant distress early-on in undergraduate training.^[15] In the profession of Medicine, burnout and demoralization is common.^[16] In order to reduce stress, Yoga should be included as a part of the curriculum in theory.^[17] A short term specific yoga intervention may be effective in improving general and mental well being in MBBS students. It is feasible and practical to include yoga practice in block postings of community medicine.^[18]

More research needs to be performed in our Medical Colleges with relation to physiological alterations produced by Yoga. For this, Physiology Teachers and Medical Students have to acquire more knowledge of Yoga.^[19] Yoga is a Hindu way of life and every human being, a potential yogi.^[20]

The role of Yoga in Modern Medical Education

Mentorship is a critical aspect of career development that is often overlooked as a result of increasing clinical, administrative and research demands on academic medicine faculty staff.^[21] Yoga offers hope. Yoga is a way to take hold of and define our direction and it is open to everyone. Through Yoga practice, Doctors can develop their intuition. The human body is the expression of divine life. The Vedas, the Upanishads, Bhagavad Gita and Patanjali Yoga Sutras are the pillars of Hindu belief.

The word Yoga means „unity“ or „oneness“ and is derived from the Sanskrit word “yuj” which means „to join“. Yoga is an ancient philosophical and religious tradition thought to have originated in India in 5000 BC. Breath is a dynamic bridge between the body and mind.^[22] Yoga is Homeostasis. Kapālabhāti, also known as the skull shining breath, involves rapid breathing consisting of active expiration with the help of abdominal muscles and passive automatic inspiration taking place during relaxation. The respiratory rate may be as high as 100/min during Kapālabhāti.^[23]

According to Patanjali, Yoga consists of eight steps or limbs, which are all equally important and are related as parts of a whole. The purpose of these eight limbs is discriminative Enlightenment or Self Realization. But here the emphasis will be on health benefits. The eight steps or limbs of yoga are as follows:

1. Yama: Codes of restraint, abstinences, self-regulations
2. Niyama: Observances, practices, self-training
3. Asana: Meditation posture
4. Pranayama: Expansion of breath and Prana, regulation, control
5. Pratyahara: Withdrawal of the senses, bringing inward
6. Dharana: Concentration
7. Dhyana: Meditation
8. Samadhi: Deep absorption, meditation in its higher state, the state of perfected Concentration.

The five Yamas

The five yamas are considered codes of restraint, abstentions, self-regulations, and involve our relationship with the external world and other people. These apply equally to thought, word, and action. The five yamas are as follows:

1. Ahimsa: Non-violence, non-harming, non-injury
2. Satya: Truthfulness, honesty
3. Asteya: Non-stealing, to the extent that one should not even desire something that is not his own. It also means that we should consider that whatever resources are available to us are borrowed from the nature. Using them or acquiring them more than minimum required for living amounts to stealing as these are then not available to others.
4. Brahmacharya: Walking in awareness of the highest reality, remembering the divine, practicing the presence of God. As an effect it leads to celibacy or what one generally means by brahmacharya.

5. Aparigraha: Non-possessiveness, non-holding through senses, non-greed, nongrasping, non-indulgence, non-acquisitiveness.

The five Niyamas

The five niyamas are the observances or practices of self-training and deal with our personal inner world. These are a means for self-training in relation to body, senses, and mind. The five niyamas are as follows:

1. Shaucha: Cleanliness and purity of body and mind. It results in purification of the subtle mental essence, brings pleasantness, mastery over the senses, and capability for selfrealization.
2. Santosha: Contentment or comfortable acceptance of what one currently has. It brings joy and happiness from within.
3. Tapah: Through training of the senses, there comes a destruction of mental impurities and an ensuing mastery over the body and the mental organs of senses and actions.
4. Svadhyaya: Self-study, reflection on sacred words, and study of the scriptures. Through this one attains communion with the underlying natural reality.
5. Ishvarapranidhana: Surrender and dedication to the Supreme Being or Causal Source, devotion, and surrender of fruits of practice. It helps in achieving the state of perfected concentration (Samadhi).

Asana: Practice of postures to make body fit for long sittings for meditation. For meditation any posture may be used, which is steady (head, neck, and chest must be aligned, leaving the natural curve in the spine), stable, motionless, and comfortable. It is achieved by relaxing attention or loosening of effort to sit in a particular posture and allowing attention to merge with the infinite.

Pranayama: Practice of breath control and breathing techniques with awareness, making breathing slow and subtle. Exhalation is prolonged. The pause between inhalation and exhalation is eliminated. It helps in control of mind and concentration (dharana).

Pratyahara: Withdrawal of the senses from the external world. When the mental organs of senses and actions (indriyas) cease to get engaged with the corresponding objects in their mental realm, they assimilate or turn back into the mindfield from which they arose, this is called pratyahara.

Dharana (Concentration): It is holding or fixing the attention of mind onto one object.

Dhyana (Meditation): It is sustained concentration.

Samadhi (absorption in the infinite): Trance or a state of bliss, reaching a state of absorption in a subject or in the Divine.^[24]

The term Meditation covers many mental techniques. One is silent repetition of a word called a “Mantra”. Mantra Meditation is a method for changing mind states, as taught in Vedanta, Buddhism and Chinese Medicine. One of the surprises with mantra chanting is a significant drop in metabolic activity, reflected in – “breath-suspensions”- spontaneous stopping of the breath without compensatory breathing afterwards.^[25]

Breathing consciously is one of the most important rituals of a Hindu. Even in ancient times, remarkably accurate concepts suggested that the large nerves of the body carried a substance that coordinated and activated the body. The Greeks and Romans called this substance as psychic pneuma. Early Hindus suggested that the spinal cord and the sympathetic-chain ganglia were channels, which they called Chakra. This Chakra carried a substance called Prana, the flow of which could be augmented by the practice of Yoga.^[26] The vagal activity is increased during and after the practice of alternate nostril yoga breathing ANYB, which could have contributed to the decrease in BP and changes in the HRV.^[27]

The significance of Chanting Meditation

Practicing meditation is considered a way of training the mind. One way to reach a meditation state is through chanting or repetition of sounds, words or phrases known as “mantra.” Mantra meditation is considered one of the most popular types of meditation and is present in many traditions (Braboszcz et al., 2010). A mantra is a sound, word, or sentence that can be either recited aloud or mentally, as internal speech. It is held that body vibrations and sensations induced by a mantra repetition help in calming and focusing the mind and the body without the need for intense concentrative efforts (Braboszcz et al., 2010) and are believed to result in profound relaxation, marked by breath quiescence, and reduced conceptual content (Travis et al., 2010). When meditators repeat the mantra, they are instructed to focus their attention on the recitation or, at variance on its meaning if it has one. Some practices involve mantra repetition with awareness of the breath (and others without breath awareness) (Wang et al., 2011).

It has been shown that mantra-meditation triggers activations in the inferior frontal gyrus bilaterally (Davanger et al., 2010), the medial prefrontal cortex, anterior cingulate cortex, limbic and superior parietal areas (Wang et al., 2011), or the hippocampus, middle cingulate cortex, and precentral cortex bilaterally are reported (Engstrom and Soderfeldt, 2010). It has been argued that during mantra repetition, there are some signs of meditation such as a mixed occurring of relaxed mantra repetition and spontaneously occurring thoughts, attempts to gently shifting back attention to the mantra when one becomes aware of mind wandering, with physical relaxation or stress reduction experiencing and an increased ability to accept and tolerate symptoms of stress as a normal part of meditation as well as everyday life (Davanger et al., 2010). The brain network governing meditation has been studied using a variety of meditation practices and techniques practices eliciting different cognitive processes (e.g., Silence, attention to own body, sense of joy, mantras, etc.). It is very possible that different practices of meditation are subserved by largely, if not entirely, disparate brain networks.^[28] The most significant physiologic change induced by Meditation is a drop in oxygen consumption.^[29]

Chanting Meditation

Speech involves not only the respiratory system but also specific speech nervous control centre in cerebral cortex, respiratory control centres of the brain, the articulation and resonance structures of the mouth and the nasal cavities.^[30]

During speech and singing the majority of time is devoted to expiration. Inspirations are more rapid than during quiet breathing at rest and expirations are longer. Hyperventilation also occurs during singing.^[31]

CONCLUSION

Teaching Yoga is an urgently needed intervention in Medical Education. Introducing Yoga way of lifestyle in Medical Education is a challenging process. Medical students should be given basic ideas about Vedic dharma and the scientific aspects of Hinduism. So, it is essential for Universities and Colleges to start Yoga Departments to impart the theory and practice of Yoga. Through Yoga education, the students can enjoy not only their life in Universities and Colleges but the rest of life in a highly dignified way.^[32]



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