

PRANAYAMA AND MAHAMANTRA CHANTING: THE TRUE INNOVATION IN MEDICAL EDUCATION

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ABSTRACT

Medicine is lifelong learning. Medical education has been the subject of ongoing debate since the early 1900s. The Flexner visited 155 medical schools in the United States and Canada between December 1908 and April 1910. In India, there are approximately 400 medical colleges, the highest number of medical colleges in the world. During September 2014 in the United Nations General Assembly, Indian Prime Minister stated that "Yoga embodies unity of mind and body; thought and action; restraint and fulfilment; harmony between man and nature; a holistic approach to health and wellbeing". Yoga is being integrated with modern medicine at many top medical centres in the world. In India, we need to systematically integrate Yoga, not only with modern medicine but also with Ayurveda for efficient health protection and affordable

primary health care.^[1] The Indian medical education system, one of the largest in the world, produces many physicians who emigrate to the United States, the United Kingdom, and several other countries. Faculty development, mentoring, integrated teaching, PBL, Seminar, curriculum redesign are already inherent in our medical education. Our hypothesis is to teach the medical students an intervention tool of Pranayama and Chanting Mahamantra as an innovation in Medical Education.

KEYWORDS: Medical Education, stress, Chanting Mahamantra.

INTRODUCTION

Medical education is going through transition necessitated by the overwhelming progress in the discovery of new information about human biology, medicine, disease, and therapy.

Integration is a current trend in medical education. Chanting Mahamantra is to improve modern education with its increasing levels of academic achievement among students.

Generally when the mind is calm and clear memory improves. Therefore, it is hypothesized that the Gurukula Education System (GES) can improve memory. In the Indian tradition it is held that recitation of *mantra* with resonance, a vital practice in Gurukula Education System (GES), helps improve memory.^[2]

Chanting is soothing to humans and group chanting can induce euphoria that some humans call a religious or mystical or “spiritual” feeling. If you combine chanting with dancing or just holding your arms in the air, swaying back and forth, you become euphoric and feel bonded with others in your group.^[3]

A mantra is a religious or mystical sound, word, or poem that can be either recited aloud or subvocally. When meditators repeat the mantra, they are instructed to focus their full attention on the recitation, and also sometimes on its meaning if it has one. Some practices involve mantra repetition with awareness of the breath (and others without breath awareness). As with other types of meditation, when meditators experience mind-wandering episodes, they are simply instructed to bring their attention back to the mantra.^[4]

Singing is prolonged speaking. Choir singing is known to promote wellbeing. While chanting, heart rate (HR) is accelerating and decelerating constantly. This fluctuation in HR is called heart rate variability (HRV). Various cultures use this technique wherever people gather to achieve relaxed communicative states. Interestingly, coordinated respiratory activity, irrespective if it is caused by yoga breathing, mantra chanting, praying or singing is ritually performed in most religions.^[5]

DISCUSSION

The practices of Medicine and music have often gone hand in hand. Many doctors have also been musicians. Drums and mantra are the rhythms for inducing healing through altered states of consciousness. In many cultures, medicine and music are combined in ceremony: Apollo in Greece and Sarawathi in Southern India. Chanting of mantra is to integrate the chakras, involving a spiritual aspect.^[6] Why does chanting, drumming or dancing together make people feel united? The caudate (which also responds to monetary reward) relates synchronized activity to basic reward processing in the brain.^[7]

The major focus of voice therapy for the patients with phonatory instability is to reduce the unsteady, hoarse, rough voice quality by targeting steady, clear phonation. One way to reduce vocal instability is to produce a more relaxed phonation, by Chanting.^[8]

There is ample evidence to suggest that academic dishonesty remains an area of concern and interest for academic and professional bodies.^[9] Though doctors are considered to be respectful role models of professionalism and ethics, medical students are no strangers to academic dishonesty. The prevalence of academic dishonesty is high. Academic integrity and ethics should be emphasized to the students which might help them in becoming professional and honest doctors.^[10] Fraud can be fabrication, falsification, and plagiarism of data or even deception in conduct. Research fraud is a reality which nobody can shy away from.^[11] Finally, of course, by no means all medical fraud is committed by doctors - in which case, other disciplinary mechanisms will have to be devised.^[12] Academic dishonesty has been linked to burn-out and distress.

The success of the scientific endeavour is largely based on trust in the competence and integrity of researchers, and all involved in its production, oversight and dissemination. Implementing strategies targeting systems and individuals that promote the responsible conduct of research is urgently required to restore faith in the aspirations, integrity, and results of scientific research.^[13]

Medical research is the cornerstone of scientific research and publication of medical research is the cornerstone for the propagation and dissemination of medical knowledge, culminating in significant effects on the health of the world's population. Educating potential researchers at an early stage (e.g. at medical college) on the mechanics of research ethics is essential to finding a solution to this problem.^[14]

Institutions should develop environments that promote integrity.^[15] Encouraging faculty and administrators to adopt zero tolerance towards cheating and nourishing a culture of intolerance to dishonesty among students should be a part of the ethos of every medical college.^[16] Over the four and a half years of undergraduate medical education, the inward God could have been irrevocably awakened in each student.^[17]

The scientific method is self-correcting and no drastic remedies are required. As Pogo said, "We have met the enemy and they are us."^[18]

PRANAYAMA

Humans are engaged in a continuous action to locate the sources of food and shelter to avoid danger, have sex and sleep. Sensors provide information about the world outside and inside. Humans are biological computers. The great beauty of Physiology is that the human body is much more than the sum of its parts. Of all of the body's functions, Breathing is unique in that it is characterized by both automatic and conscious control. The process of breathing is one of the great miracles of existence. Breathing is essential to life.

Cognitive development appears to involve the fine tuning and establishment of appropriate circuitry among existing neurons.^[19] The brain perceives the world, plans for the future, sleeps, wakes, fears, desires and sometimes dreams of happiness.^[20] A breath in, breath out, 12-18 times every minute may appear like a simple process, but this simplicity is deceptive because breathing is amazingly responsive to small changes in blood chemistry, mood, level of alertness, and body activity.^[21]

Pranayama (in Sanskrit) is voluntarily regulated specific yoga breathing practices which include breathing with awareness. Pranayamic breathing, defined as a manipulation of breath movement, has been shown to contribute to a physiologic response characterized by the presence of decreased oxygen consumption, decreased heart rate, and decreased blood pressure, as well as increased theta wave amplitude in EEG recordings, increased parasympathetic activity accompanied by the experience of alertness and reinvigoration.^[22] Relative nostril efficiency (nasal cycle) is related to performance on cognitive tasks.^[23] Medical students need to have a good visuo- spatial memory in order to learn and reproduce the practical class experiments that is demonstrated to them.^[24]

MAHAMANTRA CHANTING

Chanting is a way to produce healing vibrational frequencies of sound. Over the millennia, it has been observed that each chakra system has a specific healing frequency of sound. This encourages a rebalancing and purification that brings us back to what we are and always will be- that is the ONENESS that we all are.^[25]

While respiratory change that accompanies emotions can occur unconsciously, respiration can also be voluntarily altered associating with an activation of the motor cortex. There may be no physiological expression for the association between the three areas of the brain that regulate respiration: the brainstem, the limbic system, and the cerebral cortex. The brainstem

works to maintain homeostasis, the limbic system is responsible for emotional processing, and the cerebral cortex controls intention.^[26]

The process of making ethically complex decisions can be influenced by physician's personal characteristics, personal social values, and moral judgment. Medical education must re-focus its efforts to produce healthcare professionals who are not only competent with their skills but are also sufficient in their moral reasoning abilities. Our lives - and the quality of our lives - may depend on it.^[27]

The concept of a holistic learning environment is based on the recognition that students have both academic and non-academic stressors that can negatively impact their learning. We must help students minimize the influence of these stressors on their learning. Singing in church, singing at summer camp, singing or playing an instrument in elementary, middle, or high school, dancing, listening to, or singing along with a live performance are all experiences with which most students can identify in a positive way. It is reasonable, therefore, to propose that providing students with a participatory experience that includes music may help restore a sense of balance to their emotional well-being and may reinforce a sense of community.^[28]

Chanting is the need of the hour especially during these modern times of stressful lifestyles. Chanting simply means singing (rhythmic speaking) certain sounds or words. Chanting calms our emotions and helps meditate better. Chanting has enormous positive effects on our body and mind. Chanting practices helps in tolerating hardships and removes many of agitation and anxiety that many people are affected by.^[29]

Reciting the Ave Maria prayer and yoga mantras enhances and synchronizes inherent cardiovascular rhythms because it slows respiration to almost exactly six respirations per minute, which is essentially the same timing as that of endogenous circulatory rhythms. The rosary is a repetition 50 times of the Ave Maria, the whole 50 repeated three times. Each cycle, recited half by the priest and half by the congregation, is—in the original Latin—normally completed within a single slow respiration. We were surprised to find that each cycle (and break) of the Ave Maria (both “priest's” and “congregation's” parts, unrehearsed) took almost exactly 10 seconds. The benefits of respiratory exercises to slow respiration in the practice of yoga have long been reported and mantras may have evolved as a simple device to slow respiration, improve concentration, and induce calm.^[30]

CONCLUSION

We request the medical community to make changes in their curriculum, thirty minutes a day, five times a week of exercise (Pranayama Breathing exercise), which is more cost effective than counseling.^[31] The Mahamantra has potential in addressing problems related to stress and depression and that it is to be considered as one possible component of a spiritual approach to social work practice.^[32] The practice of Vedic chanting in a traditional way can also be used as one of the powerful means as any other yogic practices like asana, pranayama, or meditation in calming down the mind, enhancing memory and in effective improvement of attention.^[33]

Success in a medical career depends more on personality than academic achievement. Predictors of success in medical career are an important tool to recognize the indicators of proper training. Academic achievement predicts only professional competence. Coping styles are significant indicators of satisfaction with medicine as a career. Therefore, success in a medical career seems to be a consequence of the level of personality structure integration, and not a simple result of the medical education process.^[34]

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