

INTRODUCTION OF YOGA IN THE CURRICULUM OF HIGHER EDUCATION IN INDIA

DOI No.: 10.5958/2278-795X.2021.00032.1

Laxmi Shankar Rath, University of Patanjali, Haridwar, Uttarakhand, India.

Yoga is being practiced in India since time immemorial. But due to a long Islamic and British rule it was almost forgotten. Forceful imposition of Macauley system of education nearly devastated our ancient system of Yoga, Pranayama, naturopathy and Ayurveda. Presently, thanks to Swami Ramdev Ji, Mr B K S Iyengar, Srivatsa Ramaswamy and T. Krihnamacharya for revamping the ancient practice of Yoga, asanas and pranayama in India and the world. The Ayurvedic and naturopathic system of medicine has been gradually adopted by people after the failure of allopathic system in treating many chronic diseases like diabetes, rheumatoid arthritis, asthma, eczema, stress and so on. Again here Acharya Balkrishna ji, Vaidya Madhav Vashudev Kolhatkar and many other vaidyas has been catalytic in the propagation of this traditional system of medicine. In addition to it India has been a melting pot of various other systems knowledge including Unani, Siddha and tribal medicines. We need more research on these.

Yoga is an ancient Indian system of life management that includes many physical poses called asanas, breathing techniques (pranayama), some relaxations and meditations. It aims towards the building up of a healthy mind within a healthy body. It was a part of daily chores in ancient Indian society to enhance vitality and maintain physical and mental well-being. The figurines found from the Indus-Saraswati civilization (3000BCE) clearly proves it especially the "Pasupati" seal where a three faced being (Rudra) wearing a horned headgear is seated in a Yogic posture surrounded by elephants, lions and buffaloes.

According to Maharshi Patanjali's Yogasutra there are eight elements of Yoga, viz; yama (abstinence), niyama (practice with devotion), asana (physical postures), pranayama (breathing exercises), pratyahara (withdrawal of all senses), dharana (concentration of mind and body), dhyana (single minded meditation) and Samadhi (absorption in God). It is a little bit similar to Tai Chi and Qi Gong of China as far as asana part is concerned. Later another form of Yoga came out which is called Kriya Yoga (Action oriented Yoga). It consists of tapas (asceticism), swadhyaya (self help with devotion) and pranidhana (surrendering the fruit of one's action to God). It was popularized by

Paramahansa Yogananda. If it can be strictly practiced then it can lead to physical, mental and spiritual development. Presently a popular form of Yoga has been practiced called Hatha Yoga (Yoga of activities). It is a physical exercise regimen combined with yogic postures. It focuses on Pranayama followed by asanas and end in savasana. It is designed to align and calm the body, mind and spirit.

Now-a-days, as a physical and mental exercise, Yoga has been recognized and practiced throughout the world. In some countries it is taught and practiced in schools and colleges also. In USA alone, 36-37 million people practice Yoga on a regular basis daily as per the 2016 Yoga in America study conducted by Yoga Journal & Yoga Alliance. Nearly 34 % Americans do it for fitness, stress relief and flexibility. There Yoga complements with other forms of exercises like running, group sports, weight lifting and cycling. In Spain also it is a growing sport. According to a report published by University of Jaen, Spain, academic performance of students was improved by yoga practice because it improves brain functions, better attention and memory. Attention span of 98% students increased and 87% had less anxiety. The students developed better socialization capacity, had less aggressive and a better self-knowledge. It helped them in self-discipline, and self-control leading to high level of awareness, concentration and awareness. It helped in personality development. The efficiency of handling life situations increased. It boosted higher attention in studies and better stamina in sports. These reports clearly reveal the usefulness of Yoga and Pranayama for the betterment of people. Truly the United Nations has declared June 21 as International Yoga Day.

In India, National Council of Education, Research & Training (NCERT) probably understood the importance of Yoga for the betterment of students very early and hence it implemented books on Yoga in school curriculum. The guiding principal of the New Education Policy (NEP) 2020 is to conserve and propagate the rich heritage of Indian knowledge and practices (Section 0.7). So our courses should be so designed as to incorporate all essential knowledge for meaningful social engagements and holistic development of students. There are at least two big universities established in India dedicated to Yoga education and research, one at Bengaluru named Swami Vivekananda Yoga Anusandhan Sanstha (S-VYASA) and another at Haridwar named University of Patanjali (UOP). These universities should be harnessed for developing a meaningful Yoga curriculum to be implemented throughout India for college and university students.

After a long time, this year University Grants Commission (UGC) of India understood the benefits of Yoga and had instructed Colleges and Universities to observe a 45 minute Common Yoga Protocol (CYP) on 21 June 2021 when the world was celebrating International Yoga Day. Due to Covid 19, UGC had organized a digital Yoga campaign with thematic message # Be With Yoga Be At Home. Ministry of Ayush, the premier body in India for propagation of Yoga, Ayurveda and other complementary and alternative systems of medicine (CAM) also has developed a short duration Yoga protocol to refresh, de-stress and re-focus people at working places. The protocol encompasses:- (1) Tadasana; (2) Skandha Chakra; (3) Ardha Chakrasana; (4) Nadishodhana Pranayama and (5) Bhramari Pranayama and Dhyana. (https://www.ugc.ac.in/pdfnews/1472653_Yoga-Protocol_001.pdf) An android based Yoga application Y-break is also made available in the Google play store for common people. Its main purpose was to keep fit and healthy to the general mass by Yogasnas. These are very nice steps taken by UGC and Ministry of Ayush for the overall development of students.

Time has come to integrate all types of healthcare systems with Yoga. Integrative medicine is the need of the hour. Whether it is allopathy, ayurveda, unani, homeopathy, siddha, naturopathy, community medicine or paramedical systems there must be some basic understanding of Yoga by the respective practitioners for treatment of diseases.

Several articles have been published till now which clearly shows the physical, mental and behavioural benefits of Yoga practitioners. Therefore for the benefits of students and teachers if at least a 10 minute compulsory CYP can be implemented in the Choice Based Credit Systems (CBCS) model in all colleges and universities then so many social and psychological problems can be eradicated. It can also improve the quality of teaching learning process which has been given the highest weightage by the National Assessment & Accreditation Council (NAAC). Learning involves the pathways through which a learner strive to acquire the habits, skills, knowledge and values which are essential for effective participation in a civilized society. It is brought about only through transmission of knowledge, values and behaviour. All these important components can be inculcated to students by systematic practice of Yoga and Pranayama with pedagogic teaching and quality research in colleges and universities. By adopting Yoga along with value education, India can be transformed into "Incredible India" in

real sense.

REFERENCES:

1. B K S Iyengar (2017). *Light on Yoga*, Harper Collins Publishers Limited, New York
2. Swami Satchidananda (2012). *The Yogasutras of Patanjali*, Integral Yoga publications
3. A. Balkrishna (2006). *Ayurveda: Its Principles & Philosophies*, Divya Prakashan, India
4. Chris C Streeter, *et al* (2007). Yoga Asana Sessions increase brain GABA levels: a pilot study, *Journal of Alternative and Complimentary Medicine*, Vol 13 (4), Pages 419-426
5. Shirley Telles, *et al* (2013). Effect of Yoga or physical exercise on physical, cognitive and emotional measures in children: a randomized controlled trial, *Child and Adolescent Psychiatry and Mental Health*, Vol 7 (1), Pages 1-16
6. Swami Satyananda (1999). *Four Chapters on freedom: Commentry on Yoga sutras of Patanjali* Saraswathi, Munger, Bihar School of Yoga
7. David Moreno Molina, *et al* (2020). Analysis of Yoga as an Inclusive Sport in Educational Contexts, *Educational Sciences*, Vol 10 (162), Pages 1-17
8. Sugrue M. *et al* (2017). Yoga Anatomy Workshops: Yoga as Experimental Learning in Undergraduate Anatomy Courses, *HAPS Educator*, Vol 21 (3), Pages 65-74
9. Mala V. (2018). Adolescent Student's Problems and Yoga As a Preventive Measure, *I-manager's Journal on Educational Psychology*, Vol 11 (4), Pages 1-7
10. Hepburn S. & McMohan M. (2017). Pranayama Meditation (Yoga Breathing) for Stress Relief: Is it beneficial for teachers?, *Australian Journal of Teacher Education*, Vol 42 (9), Pages 142-159.

Short Communication

Integrative Medicine- A New and Emerging Discipline in the Treatment of Chronic Diseases

Laxmi Shankar Rath

From, Associate Professor, Department of Chemistry, University of Patanjali, Haridwar-249 405, Uttarakhand, India.

Correspondence to: Dr Laxmi Shankar Rath Associate Professor, Department of Chemistry, University of Patanjali, Haridwar-249 405, Uttarakhand, India. E-Mail: lsrath@rediffmail.com

ABSTRACT

Integrative medicine is the need of the hour. It focuses on a holistic approach to the treatment of a disease. Here conventional medical treatment is done along with customized integrative modalities. The aim is not to replace standard treatment but to integrate well-researched safe intervention of complementary treatment with regular therapies. We need more research on the symbiosis of the modern western allopathic system of medicine with complementary and alternative medicine (CAM) for curing diseases with the mental and emotional wellness of patients. CAM use is common in individuals with chronic health problems in USA; 70-90% of patients with arthritis and 50% with irritable bowel syndrome use CAM. Push and pull factors explain this phenomenon. Push factors include the perceived failure and adverse effects of conventional medicine and dissatisfaction with its reliance on technology. Pull factors include the perceived effectiveness of CAM and belief that CAM offers a holistic and patient-centred approach.

Keywords: CAM, Integrative medicine, Allopathy, Yoga, Ayurveda.

Integrative medicine is an emerging medical discipline where Complementary and Alternative Medicine (CAM) is integrated with conventional healthcare practices. In the standard medical setting, patients usually present their physical symptoms to a physician, and the medical practitioner focuses exclusively on a diagnosis of the disease. They never understand the mental, behavioral and social dimensions of the patient [1]. Actually, these components also play a vital role in developing a disease. In integrative medicine, a holistic approach is made to fight a disease in its totality. Integral medicine blends allopathic medicine with CAM.

Currently, there is no permanent treatment in the allopathic system of medicine for chronic diseases like diabetes, obesity, stress, allergies, acute pain, and so on. Here integrative medicine is often useful for the treatment of these diseases. CAM includes the following disciplines: - (1) Ayurveda, (2) Homeopathy, (3) Naturopathy, (4) Acupuncture, (5) Reiki, (6) Chiropractic therapy, (7) Reflexology, (8) Yoga and pranayama, (9) Meditation, (10)

Hypnosis, (11) Tai Chi, (12) Imagery, (13) some types of soothing music, (14) Dietary supplements including special foods, and herbs, etc [2]. In treating patients, a personalized approach is taken in integrative medical care where a physician treats the disease with the collaboration of CAM practitioners, social workers, spiritual counsellors and behavioral healthcare providers. This structure can have the added benefit of de-stigmatizing mental healthcare. Here the patient need not go from one to other healthcare practitioners, all the healthcare practitioners are in one place, and proper and appropriate healthcare is needed for the patient is administered.

METHOD

Here I have searched some scientific literature from the PubMed Central of the National Center for Biotechnology Information (NCBI) of the US National Library of Medicine for the benefits of CAM for the treatment of various chronic diseases. Here I had fixed my objective of literature search as Yoga, Ayurveda, and Bay Leaves. I

found multiple papers but, I studied some selective and most relevant papers only. I selected topics on Yoga and Ayurveda because I belong to the University of Patanjali at Haridwar which is famous for Yoga and Ayurvedic studies. I choose Bay Leaves because it is one of the popular spices of India used in pickling, marinating, flavoring stews and stuffings. It is also used in many ayurvedic and rural medications.

RESULTS

I found many papers where presently yoga and naturopathy have been practiced throughout the world for health and vitality. In some countries, it is taught and practiced in schools and colleges also. In the USA alone, 36-37 million people practice yoga regularly as per the 2016 Yoga in America Study conducted by Yoga Journal & Yoga Alliance. Nearly 34 % of Americans do it for fitness, stress relief, and flexibility [1]. In Spain also, it is a growing fitness regimen. An article published by the University of Jaen in Spain reported that the academic performance of the students of the University was improved a lot by practicing yoga. Yoga helped the students to improve brain functions, better attention and memory [2]. The attention span of 98% of students increased and 87% had less anxiety. The students developed better socialization capacity, had less aggressiveness and better self-knowledge. It helped them in self-discipline and self-control leading to a high level of awareness and concentration. It helped in personality development also. The efficiency of handling life situations increased. These reports prove the usefulness of yoga and pranayama (regulated breathing) for the betterment of people and for fighting various chronic diseases. Several articles had been published reporting the physical, mental, behavioral benefits of yoga practitioners and their benefit in the treatment of various chronic diseases [3-6].

Yogasanas increase physical flexibilities, strength, and coordination of different systems in the body [7]. Benefits of Yoga practice were reported by 94.5% of 3135 respondents as reported by a survey conducted recently by Shirley Telles, Sachin Kumar Sharma, Dipak Chetry, and Acharya Balkrishna in 2020 [8]. There are a few adverse effects associated with the practice of yoga such as fatigue and muscle injuries. However, these effects can be minimized by the appropriate degree and intensity of Yoga practices. A combination of four yogic techniques yields a better result than a yogic practice done in isolation. Their report suggests that a combination of asanas, pranayama, kriyas (cleansing methods), and dhyana (meditation) gives a better result than asanas or pranayamas done in isolation.

We can take another example concerning the Ayurvedic system of medicine of CAM where it is stated that bay leaves (*Laurus nobilis*) are effective in the treatment of blood sugar. Bay leaves contain the following nutritional contents that are responsible for the treatment of various diseases. The leaves are delicately fragrant but have a bitter taste. The spicy fragrance is due to the presence of *Eugenol* (11-12%), *Methyl Eugenol* (9-12%) *Elemicin* (1-12%) [9]. It also contains a few more oils like *Linalool*, *Cadinine*, and *Flavonoids*. Each 100 gram of bay leaves contains 313 Kcals of energy, 7.6 grams of proteins, 75 grams of carbohydrates, 26 grams of dietary fibers, 2.3 grams of saturated fat, 1.6 grams of monounsaturated fats, 2.3 grams of polyunsaturated fats, 1.1 grams of omega-3 fatty acids and 1.2 grams of omega-6 fatty acids. It also contains Vitamins A, C, B6, Thiamine, Riboflavin, Niacin, and Folate. It contains minerals like Ca, Fe, Mg, P, K, Na, Zn, Cu, Mn, and Se [10]. Saxena & Vikram NK, in 2004, had written a review article on the effectiveness of some selected Indian plants including bay leaves in the treatment of type 2 diabetes [11]. Recent research has also indicated that the bay leaves are responsible for improving insulin function *in vitro*. In a study conducted in 2009 by Khan A, Zaman G, and Anderson RA, bay leaves have been shown to improve insulin function *in vitro*. The study revealed bay leaves reduced serum glucose to 21-26% after 30 days [12]. Total cholesterol decreased 20-24%. Even low-density Lipoproteins (LDP) cholesterol decreased to 32-40%, and the High-density Lipoproteins (HDL) cholesterol increased 20-24%. Triglycerides also decrease 25-34% after 30 days. They stated in the summary part that consumption of bay leaves 1-3 grams per day for 30 days can decrease the risk factor for diabetes and cardiovascular diseases and suggested that bay leaves may be beneficial for people with type 2 diabetes. In another study recently, Alchalabi SMM, Majeed DM, Jasim A, and Al-Azzawi KSA (2020) also found similar results [13]. They found in diabetic rats a significant decrease in fasting blood glucose and a significant increase in fasting insulin level. The triglycerides, total cholesterol, LDL, very low-density Lipoproteins (VLDL), *alanine aminotransferase*, *aspartate aminotransferase*, *alkaline phosphatase*, B. Urea, and S. *creatinine* levels were significantly decreasing while HDL and body weight increased as compared to control rats after 30 days of treating by 200mg per KG body weight alcoholic extract of bay leaves.

DISCUSSION

The results of various studies indicate that Yoga, asanas, Ayurveda, and lifestyle change which are parts of CAM are

beneficial for treating various chronic ailments. Research studies on Yoga and Ayurveda as therapeutic interventions have been conducted only over the past 5-6 decades are relatively few. However, they are conspicuous and remarkable [10]. Still, we need more research on Yoga, asana, pranayama, and ayurvedic intervention for treating various diseases along with the conventional system of disease treatment. Undoubtedly asanas have a positive effect on fitness, physical flexibility, and mental stability [5]. While pranayama practices resulted in greater awareness, less stress, and a better quality of life, and yoga intervention increased self-confidence and self-efficacy.

Similarly, the applications of Ayurveda in the treatment of chronic diseases are noteworthy. However, it should be noted here that Yoga, asana, and Ayurveda are a longstanding integral part of Indian cultural tradition. Most of these studies are conducted in India. So, these researches should be widespread and should cover worldwide. Cross ethnic and cross-cultural studies should be conducted to diversify it and to understand the efficacy of CAM on diverse populations [4]. Also, the degree to which Yoga, asanas, and pranayama interventions are curative has yet to be determined. However, it is safe to suggest that Yoga, asanas, and pranayama can be a beneficial adjunct treatment to the conventional treatment because there is a low risk for side effects. Also selecting and applying appropriate postures, breathing exercises and life style changes including eating habits are beneficial in treating diseases.

CONCLUSION

The conclusion of this study is that the need of the hour is the proper integration of traditional and modern systems of medicine in the treatment of chronic diseases. In many well-known universities in the USA specialized departments are functioning for integrative medicine like the Arizona Center for Integrative Medicine in Tucson, Arizona; Integrative Medicine Center at MD Anderson Cancer Center in Houston, Texas; UCSF Osher Center for Integrative Medicine in San Francisco, California; University of Wisconsin Integrative Medicine in Madison, Wisconsin; University of Maryland Center for Integrative Medicine in Baltimore, Maryland to name a few. However, India is lagging behind in this respect due to the so-called "conflict of interests" between allopathic or western medicine and CAM systems of medicine. Both can complement each other if they can be used judiciously. Instead of compartmentalization of different fields, we should focus more on the integration of medicines for the benefit of patients. We have to understand different fields

of the medical system including CAM to treat patients in a better way with mental and emotional wellness simultaneously.

REFERENCES

1. <https://www.Yogaalliance.org/portals/0/2016%20Yoga%20in%20america%20study%20results.pdf>
2. Molina DA, Fernandez AH, Navio EP. Analysis of Yoga as an Inclusive Sport in Educational Contexts. *Edu Sci.* 2020; 10 (162):1-17.
3. Streeter CC, Jensen JE, Perlmutter RM, *et al.* Yoga Asana Sessions Increase Brain GABA Levels: A Pilot Study. *J Alt and Compliment Med.* 2007; 13(4):419-426.
4. Swami Satyananda. Four Chapters on freedom: Commentary on Yoga Sutras of PatanjaliSaraswathi, Munger. Bihar School of Yoga. 1999; 1(3):12-18.
5. Mala V. Adolescent Student's Problems and Yoga as a Preventive Measure, I-manager. *J Edu Psychology.* 2018; 11(4):1-7.
6. Hepburn S., McMohan M. Pranayama Meditation (Yoga Breathing) for Stress Relief: Is it Beneficial for Teachers? *Australian J Teacher Edu.* 2017; 42(9):142-159.
7. Kirkwood G, Rampes H, Tuffrey V, *et al.* Yoga for Anxiety: A Systematic Review of the Research Evidence. *British J Sports Med.* 2005; 39(12):884-891
8. Telles S, Sharma S.K, Chetry D *et al.* Benefits and Adverse Effects Associated with Yoga Practice: A Cross-Sectional Survey from India. *Complement Therapies in Med.* 2021; 57:102644.
9. Biondi D, Cianci P, Geraci C, *et al.* Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. *Flav and Frag J.* 1993; 8:331-37.
10. <https://www.lybrate.com/topic/benefits-of-bay-leaves-and-its-side-effects>
11. Saxena, A., Vikram, N. K. Role of Selected Indian Plants in Management of Type 2 Diabetes: A Review. *J Alt & Complement Med.* 2004; 10(2):369-78.
12. Khan A, Zaman G, Anderson RA. Bay Leaves Improve Glucose and Lipid Profile of People with Type 2 Diabetes. *J ClinBiochem and Nutrition.* 2009; 44(1):52-56.
13. Alchalabi SMM, Majeed DM, Jasim A, *et al.* Benefits of Ethanolic Extract of Bay Leaves (*Lauria Nobilis*) on Blood Sugar Level in Adult Diabetic Rats Induced by Alloxan Monohydrate. *Annals of Tropical Med and Health.* 2020; 23(16):12-20.

How to cite this article: Rath LS. Integrative Medicine- A New and Emerging Discipline in the Treatment of Chronic Diseases. *Indian J Integr Med.* 2021; Online First.

Funding: None

Conflict of Interest: None Stated