

TRANSFORMING WORLD; AYURVEDA IN BIG LIGHT, LIMITATIONS AND KEYS

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ABSTRACT

Background: The ancient Indian wisdom or Ayurveda with an age old history has established its position around the globe as a unique health care system with a holistic solution to many complex health hazards. The badgered sedentary lifestyle nowadays has taken a toll on global health and people are recurring back to nature. Huge seminars, conventions and conferences are now happening on Ayurveda worldwide. Recent researches on traditional medicine reveal that people have engrossed their lives with these therapies in one way or the other. Hence it is important to have a factual understanding of all healthcare traditions, which are popular, and in public demand. The strategies planned for globalizing Ayurveda has to be positively channeled to benefit the maximum people with minimum expense. It is estimated that the total market size of the Indian Ayurvedic market size is 80 billion Rupees and it is growing substantially between 10-15 percent, with the same growth rate targeted for the next 10 years. According to the WHO, nearly 80% of the people in Asian and African countries use traditional medicines as their primary medical aid. According to the UN World Tourism Organization, the role of Tourism industry in India's GDP features medical tourism that includes traditional therapies like yoga, meditation, Ayurveda and other conventional systems of medicines is currently estimated at USD 333 million and is most likely to reach USD 2.2 billion by the year 2022. **Limitations:** Under present condition there is absence of co-ordination and linkage between different Departments/Organization and their field units leading to haphazard development and absence of suitable policy. The needs of the ISM&H pharmacies, practitioners, manufacturers are to be assessed through survey. The quality of raw drugs used in manufacturing as well as the finished drugs of Ayurveda is seen with a suspicion. The lack of good teachers and good institutions of learning which further reflects in non-promising graduates coming out of these institutes. Absence of Standard Operating Procedures (SOPs) of various ayurvedic products in this sector. Absence of adequate scientific documentation is probably the fundamental problem and most serious limiting factor faced by this sector from the very beginning. **Conclusion:** Adoption of strategies from proper procurement of herbs to planned documented clinical trials; that will prove to give impetus to Ayurveda in world is the need of the hour.

Keywords: Global, Ayurveda, Ayush, SOPs

INTRODUCTION:

Ayurveda is passing through a crucial stage in its history of 5000 years in the last

decade. The immense commercial potential of the science and its three dimensional holistic approach towards health in the

physical, mental and spiritual plane has attracted the highly stressed western population who have reached the saturation point of emotional, physical and moral insecurity. The traditional medicine system Ayurveda has been used in India for thousands of year and is increasingly been used worldwide during the last few decades which is evident by rapidly growing global and national market of herbal drugs and thus it has necessitated the need to develop the quality, safety and efficacy of these medicines. People abroad have started coming to India in search of Ayurvedic detoxification in cheaper rates and another new concept has born in India: the Ayurvedic Tourism. Especially in Kerala this is a highly profit making business [1]. According to the UN World Tourism Organization, the role of Tourism industry in India's GDP features medical tourism that includes traditional therapies like yoga, meditation, Ayurveda and other conventional systems of medicines is currently estimated at USD 333 million and is most likely to reach USD 2.2 billion by the year 2022. Recently in the last decades, this science got a very big boost in the world but still it needs enough documentation according to the international standards as per the norms of evidence based medicine and a part of effective CAM system. In some of the neighbor countries of India like Sri Lanka, Nepal and Bangladesh, Ayurveda has a better status as a recognized system of medicine, where there is an increasing awareness about Ayurveda as a healing system among the public. In the countries like Argentina, Australia, Republic of Czechoslovakia, Brazil, Germany, Hungary, Italy, Russia, Japan Portugal, New Zealand, Switzerland, Malaysia, Singapore, Arab countries like UAE, Oman etc. this science has a very lower status, considered under the sub heading of

herbal remedy [2]. The *Panchkarma* practices are very popular and carried out in massage parlors. If we glance through the global scenario, one thing is clear that apart from India, Ayurveda has an independent status only in the neighboring countries of Sri Lanka, Nepal and Bangladesh. In countries like USA, UK, Germany, Australia etc., where Ayurveda is practiced, the system is very popular among the people, but the law has not recognized the system as an effective medical system. Ayurvedic medicines that are of herbal origin only are used there and that too under the label of food supplements. According to the WHO nearly 80% of the people in Asian and African countries use traditional medicines as their primary medical aid. The total size of Indian Ayurveda market is INR 50 billion and it is growing substantially at a rate between 10-15 percent, with the same growth rate targeted for the next 10 years [3]. The fact that can be comprehended from the above purview is that it Ayurveda has great potential in terms of effective line of medicine and is a cradle for the next coming future growing profit making industry. Some the countries where Ayurveda has been recognized in one form or the other are as follows:

Sri Lanka: This is the only country where Ayurveda enjoys the status of national health system. They have a separate national policy on ayurveda [4]. This Ayurvedic tradition is centuries old and the practitioners are as qualified and efficient as in India. Almost 70 years back itself the country had started Ayurvedic institutions for education. At present, they have two full-fledged Ayurveda institutes offering BAMS degree. 1. Institute of Indigenous Medicines (IIM), Rajgiriya. 2. Gampaha Wickramarachchi Ayurveda Institute, under Kelonia University. The fracture man-

agement techniques of Sri Lankan Ayurvedic doctors is excellent and the best of the kind. Many good doctors are successfully practicing Ayurveda in the classical form. Many Ayurveda graduates are coming to India from Sri Lanka for the post graduate education.

Nepal: They also have recognized the systems of Ayurveda and have a national policy on Ayurveda [5]. They also consider Ayurveda as a national health systems and good percentage of people follow Ayurveda as CAM systems for healing purposes. Nepal runs a recognized Ayurveda degree course at the Tribhuvan University in Katmandu.

Bangladesh: This is another neighboring country of India, which has recognized Ayurveda legally. They also conduct 5 1/2 year degree course in Ayurveda by university of Dhaka [6]. In the second group of nations, in some countries like Portugal, Italy, Germany, Australia, Mauritius, Hungary etc. Ayurveda has a foothold and in UK, US and Russia, Ayurveda is very widely spread.

USA: In USA, Ayurveda is having a very high commercial potential and the *Panchkarma* therapy is practiced widely. 47% of American population is estimated to have resorted to CAM systems and Ayurveda is highly preferred [7]. The Ayurvedic drugs are sold under the label of food and dietary supplement. Under the dietary supplement and Health Education Act, USFDA allows certain structure function claims of herbal products. People like Dr. Deepak Chopra, Robert Svoboda, and David Frawly etc. have created a good number of followers and they have written many books on Ayurveda. Many educational institutes are offering training for self-healing certification as practitioners with home study and minimal classroom training. The California College of Ayurveda conducts a two

year course, which certifies the student as clinical Ayurveda specialist, and the State of California has officially approved the college as a vocational training institution in the field of Ayurveda. Apart from this, the states of Florida, New Mexico and New York have approved the Ayurveda teaching in the territory level and the certificate holders enjoy the status of herbal practitioners. So many associations are there in U.S like American Academy of Ayurvedic Medicine, American institute of Vedic Studies etc.

Russia: Lots of interest has been generated in Ayurveda and Yoga in Russia. Since last 6 years, the NAAMI Ayurveda Medical Centre runs successfully. They have entered into a memorandum of understanding (MoU) with the government and has recognized *Panchkarma* and *Kshara Sutra* therapies [8]. The Russian translation of *Charaka Samhita*, *Susruta Samhita* and *Ashtanga Samgraha* are available. In the institute of medico-socio rehabilitology, Ayurveda is taught from the second year until the end.

United Kingdom/EU countries: In the recent days, there is a wide increase in the awareness about Ayurveda in U.K. About 150 Ayurvedic doctors are practicing in UK irrespective of the hostile attitude of the Government to recognize Ayurveda as a medical system with independent status. Two Ayurveda colleges run in London, and these institutions offer a B.A. (Hons.) degree to the students with a part-time three-year course with just 1000 hours of classes [9]. UK allows the sale of Ayurveda medicines under the label of herbal medicine, the present practitioners are practicing without license as herbalists, and this is against the existing law. More dangerous is the practice of non-herbal medicines under the label of herbal medicines. In countries like Argentina, Brazil,

Republic of Czechoslovakia, Greece, Israel, Netherlands etc. Ayurveda is coming up in recent years. Some of these countries offer some post graduate courses for medical graduates to learn basics of Ayurveda. The short-term courses for self-health care are also in operation.

Australia and New Zealand: Australia and New Zealand are presently going through the harmonization exercise in the regulation of the practice and commerce of CAM therapies. The New Zealand legislations at present are very liberal, creating an easier entry for the CAM practitioner. Australia puts some more strict regulations, but they have a fast increasing clientele for Ayurveda and the practitioners are recognized as CAM practitioners. The National Academy of Natural Medicines is recognized and is on the way to getting full accreditation. It offers a diploma in Ayurveda after a four year course with clinical practice.

Germany: There is a great awareness about Ayurveda in Germany. Ayurvedic physicians from India regularly visit Germany for lectures and demonstrations as academicians. The legislations are not favorable for the practice of Ayurveda and the ongoing practices are under the pretext of demonstrations [10]. Many German doctors prescribe Ayurvedic formulations and practice *Panchakarma* techniques. Many of them have taken courses in India.

Italy: There is an Istituto Italiano di Ayurveda with large membership that operates in Firenze [11]. The Italian Ministry of Health, like other European countries medical agencies, remains suspicious and are strict in looking at such importation. Strangely, the metallic preparations are per se considered poisonous without any scientific justification. They simply don't understand that such products are detoxified and absolutely harmless.

Japan: For the past thirty years, Japan has shown interest in the study, research and practice of Ayurveda. In 1969, Prof. Hiroshi Maruyama of Osaka Medical School has established the Society of Ayurveda in Japan [12]. Since then various Ayurvedic experts are visiting Japan and propagating the science there. The Institute of Traditional Oriental Medicines in Tokyo was established in 1994. They conduct short-term Ayurvedic courses for health professionals. The system is slowly getting popularized as a CAM.

Mauritius: In Mauritius, an Ayurvedic clinic is successfully running with the Government recognition. The Government sends students to India to learn Ayurveda [13]. The people are becoming more aware of the system in the recent past.

Sultanate of Oman: The Sultan of Oman was treated by an Ayurvedic Doctor and he was so overwhelmed that he has recognized the system of Ayurveda medicine in his country and has given approval to the system, acceptance of medicine and a local entrance test for qualified Ayurveda doctors to practice in the Sultanate of Oman.

Hungary: Hungary is the only European country which has recognized Ayurveda as a medical system. The Ayurveda Medical Foundation in Hungary is coming up. Not many practitioners are there in Hungary, but the in the light of the increasing awareness, many proposed centers are waiting to be set up.

South Africa: Ayurveda practice is recognized as an alternative medicine in South Africa. It has representations in the Boards of South African Ayurvedic Liaison Committee and also the African Allied Health Professional Act. Many Ayurveda Medicines are exported to the country. Due to large presence of Indian population, the science of Ayurveda is gaining popularity in South Africa.

Despite holding a substantial share of potentially becoming as first line of medical system there are some of the hindrances in the pathway of its establishment.

- **Disoriented Ayurveda sector:** There are about 8000 registered pharmacies and more than four lakhs (400,000) registered Ayurvedic practitioners in India. Only very small percentage of the total Ayurvedic practitioners works with mutual co-operation and there is no interaction or sharing of information between different groups or organizations. The divided nature of the sector made it easy for the modern medicine sector, which is definitely organized, to overpower stealing of 98% of the total health fund allocation and eventually practitioners of this science have been neglected as second class medical professionals with no equality in any opportunities. **Solution:** The unity among the faculty and a proper unified effort to fight against the discrimination shown to the science, might instigate the government to do something for the promotion of Ayurveda, which would further be responsible for more R&D centers opening up in different parts of the country in the coming future. The aspiration for a global recognition as a medical profession and the hard work for attaining the above goal needs perseverance.
- **Lack of standardization:** No standard formulae, no standard criteria for geniuses of raw drugs, no uniformity in the percentage of ingredients, no facility to analyze the chemistry of drug, not even standard monographs and manufacturing process to follow. **Solution:** There should be a specific criteria laid down for the choice of ingredi-

ents, uniform standard for the composition, manufacturing methods with standard timing for each process, standard conditions for manufacture and so on. The implementation of GIMP is an effective foot forward towards this goal but this has to be strictly implemented with a mutual co-operation between the government and the NGOs of manufacturers. The setting up of Indians Pharmacopoeia Committee and the establishment of the pharmacopoeia laboratory of Indian medicines in Ghaziabad by the Dept. of ISM are landmarks in the attempts for standardization. Lot of efforts are done by CCRAS and NBRI (Central Council for Research in Ayurveda & Siddha and National Botanical Research Institute) and already 800 formulations are standardized and monographs prepared. There has to be sustained attempts for the scientific validation regarding the standardization of toxicity, shelf life of the product, the potency and concentration, diversification and purity of all the products. If our medicines are to cross the seas, we have to think and step ahead, for a strict uniformity in all aspects of composition, appearance, taste and action for all classical drugs irrespective of the brand name.

- **Lack of quality control measures:** It is another crucial factor that keeps away the West from recognizing our medicinal products. **Solution:** We have to have a rigid criterion for the quality of raw drugs used and for the product in terms of right combination of drugs, the purity and safety against microbial contamination and hygienic manufacturing premises. The raw drug trade, which is presently totally in the hands of private sector has to be brought to

public sector. A corporation should be established for the procurement and trade of medicinal plant on the model of the FCI. It should cover various aspects of procurement of the genuine drug, collection, distribution, export and the researches also. The drugs sold in the market may be toxic to health, may be contaminated, not ripe or mature to ensure the full properties or even completely adulterated or substituted. The proposed corporation of Indians medicinal herbs should bring the trade of medical plants under a single roof and reasonable pricing and assured quality should be provided. Each manufacturer should ensure that every batch of the entire product range is certified for this quality assurance similar bodies and labs in the model of PLIM, Ghaziabad can be set up by state governments or even organizations and the industry should strictly adhere to the quality check for every product, every batch and certification should be exhibited on the pack for proof. The drugs and formulations of Ayurveda are mainly composed of vegetable (90%) mineral and animal (10%) origin. The plants are used in their natural form as whole plant or their parts as rare material. These crude drugs are purified and processed as per classical methods. There are about 2000 medicinal plants reported in modern as well as classical literature out of which about 500 plant species are commonly used in Ayurveda. In order to establish standards of the single drugs and compound formulations used in Ayurveda, Govt of India constituted a statutory committee called Ayurvedic Pharmacopoeia Committee under the Ministry of Health and Family Welfare (Dept. of ISM&H). A spe-

cial well equipped laboratory known as Pharmacopoeial Laboratory of Indian Medicine has been established at Ghaziabad (New Delhi) in 1970 particularly to work for establishment of standards for Ayurvedic drugs and formulations. Simultaneously the work of standardization has been undertaken at specially established centers in different parts of India under the Central Council for Research in Ayurveda and Siddha. The standardization and research activity consists of pharmacognostic evaluation of authenticated drugs, pharmacological studies, phytochemical studies, pharmaceutical studies, microbiological studies, identification, preservation, isolation and characterization of active chemical constituents, etc. The elaborate studies have been carried out and are being carried out at centers of National repute such as CDRI, Lucknow, NBRI Lucknow, Gujarat Ayurveda University, Jamnagar, Banaras Hindu University, Varanasi, CSMRIA - Chennai, National Institute of Ayurveda, Jaipur, AIIMS New Delhi and other regional research institutes and centers established by CCRAS. Some of these institutes are equipped with most sophisticated instruments like NMR, Mass spectrometers. AAS, HPTLC, HPLC, etc. They also have very good Pharmacognostic, pharmacological and pharmaceutical laboratories with animal house facilities. The activities on establishment of standards over the last 30 years have resulted in the publication of Ayurvedic Pharmacopoeia of India Part-I, II and III and Ayurvedic Formulary of India Part I and II which are comparable to any international standard. Lot of research is being carried at different laboratories on com-

pound Ayurvedic formulations so as to lay down internationally acceptable standards. Though isolated activity of studying vegetable drugs and mineral drugs is being carried out by different individual workers, the organized scientific evaluation are being carried by govt. agencies only to give credibility. It is a Herculean task and a long drawn process to establish standards of all the Ayurvedic drugs and formulations but it will be achieved in due course.

- **Non-availability of some raw drugs:** The Government itself has declared certain herbs as endangered and many rich herbs have already vanished from Indian soil. Some raw materials are avoided from some classical preparation due to the non-availability and in some other cases, the required percentage is not added. This has certainly affected the quality of the drugs. **Solution:** A possible solution is that organized cultivation can be started by central and state government and leading NGOs procuring free land. Depending on the geographical peculiarity of each state and each province, the drug is to be chosen and mass cultivation can be done. Government should lease the land for this purpose and allot subsidized manures. This small scale cultivation of herbs should be encouraged by the government and NGOs for cultivating medicinal plants with their aid. Such a project will definitely be beneficial to both parties where the women and unemployed youth earn their living and the scarcity of the raw drug can be solved to some extent. Experts should declare each district favorable for growing a few spices and bodies like NBRI should be incorporated to give advices and directives. Seedling should be supplied at

nominal prices and crops should be purchased at reasonable prices.

- **Lack of easy availability of information:** It is yet another factor, which stops us from going global. There has to be an agency or authority which should be the single source of all the needed information on all aspects of the trade with adequate fund and expertise to gather data and generate information and conduct R&D work. **Solution:** The data about diagnostic and treatment methodologies, the raw material on the cultivation of herbs, the product information about the manufacturers, the market availability, the consumption data, everything has to be collected and comprehended and made available on the web. The data can be also extended to the monitoring of various health care activities, case documentations, and the various research development activities throughout the country. This will help to rationalize the finding and researches in such a way that various areas are covered equally without wasting money on duplication. A central registry of manufactures should be formulated and registration should be made compulsory. Funding should be arranged to undertake researches, the data to be collected and made public. Directives should be compiled and periodically updated. These data should be sold on to the registered manufacturers for reasonable prices. Government also should commission national statistical surveys and information should be published.

CONCLUSION

While there is extensive literature going back 5000 years to Charaka Samhita, still there is a need for proper exhibition of this medical system to the world.

Experts who have in- depth knowledge of the specifications of the concerned system can only design a fair and effective regulation for any medical system. The ultimate aim is to enhance its utility and neutralize its damage and to offer a cost effective and safe health care to the public at large. Due to high prices and harmful side effects of synthetic drugs, people are relying more on herbal drugs and this trend is growing, not only in developing countries but in developed countries too. Traditional Chinese medicine using lesser plant species than Indian Ayurveda has more established international market compared to Ayurveda which is in a tenuous condition. India has enormous resources of medicinal and herbal plants. Good Agricultural practices are one of the pre requisite conditions to ensure the quality as well as efficacy of Ayurvedic drugs (medicinal plants). It is essential that the medicines are grown in right type of soil and given all the necessary conditions. And for this education is the main key which provides knowledge for development in the field of Ayurveda and agriculture. A lot of work has to be done before demanding for a global status for Ayurveda as a separate entity of CAM System. A joint force of the Indian Government and the Ayurvedic NGOs has to work hard to collect and comprehend lots of data, lot of lobbying and strong campaigning to be done, lot of representations to be made and for all these exercises a good amount of fund has to be generated. All the major scientific & medical laboratories and research wings of Govt. of India, e.g. ICMR, CSIR and its laboratories like ITRC, CDRI, etc. are working for revalidation, confirmation and certification of various research projects as per international norms. Data of these researches are being published in various scientific journals of medicine, biology, botany and

Ayurveda. Much can be done if we join hands with great care, mutual respect, face-validity and long-term vision when it comes to Ayurveda. It is a blueprint of open-mindedness and we must collectively carry forward the idea of lifelong global learning and integration, with India being able to put forth the idea of globalizing this medical system.

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