

WHAT LIES BENEATH: THE UNTAPPED HEALTH TOURISM MARKET IN INDIA AND THE ROLE OF SOCIAL VENTURE CAPITAL IN REJUVENATING AYURVEDA TRADITION

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Abstract

There are innumerable examples of the rejuvenating capability of Ayurveda, but still those are not fully recorded and made academically available. Ayurveda, the traditional system of healing is based on the theory of balancing the body, the soul, and the mind. The present paper tries to find out the reason why people still consider Ayurveda as a life rejuvenator. This is followed with an overview of the historical perspectives of Ayurveda in India and in particular Kerala. Various problems faced by the Ayurvedic treatment centers are analysed to get an insight on the practical difficulties with possible measures to rectify the existing problems to make Ayurveda as a health tourism product. If timely care is taken (both private as well as government), Ayurveda can be effectively marketed (both domestically as well as internationally) as a health tourism product. But the ultimate success lies in developing a marketing strategy for promoting Ayurveda with a view of generating awareness among people about Ayurveda, this will in turn make more people to travel for health care towards Kerala, and this will lead to dual impact; firstly rejuvenating the Ayurveda tradition in Kerala, and secondly in turn Ayurveda helps in rejuvenating the health of people. Finally, by capitalizing on the transformational capability of social venture capital Ayurveda tradition in India and elsewhere can be rejuvenated in the coming years.

Keyword: Ayurveda, Health Tourism, Social Venture Capital, India.

INTRODUCTION

Ayurveda, the science of life, prevention and longevity is the oldest and most holistic medical system available on the planet today. It was placed in written form over 5,000 years ago in India, it was said to be a world medicine dealing with both body and the spirit. Ayurveda is the perfect solution for all human needs, wants, and desires. It is not a mere compendium of therapeutic recipes, nor is it the first one to use herbs, instead; it is one of the earliest frameworks, which systematized the knowledge. This framework is not only self-consistent but also uses cause and effect arguments to correlate manifestations of sickness, its causes, and treatment (Kumar, 2002).

According to many scholars, knowledge of Ayurveda originated from India and influenced the ancient Chinese system of medicine and also medical system practiced in Greece (Varier, M.R.R, 1993, Pushpangadan 2002, Shankar 2002). People from numerous countries came to Indian Ayurvedic

schools to learn about this world medicine and the religious scriptures it sprang from. Learned men from China, Tibet, the Greeks, Romans, Egyptians, Afghanistans, Persians, and more traveled to learn the complete wisdom and bring it back to their own countries. Ayurvedic texts were translated in Arabic and under physicians such as Avicenna and Razi Sempion, both of whom quoted Indian Ayurvedic texts, established Islamic medicine. This style became popular in Europe, and helped to form the foundation of the European tradition in medicine. In 16th Century Europe, Paracelsus, who is known as the father of modern Western medicine (Allopathic), practiced and propagated a system of medicine, which borrowed heavily from Ayurveda. Thus, Ayurveda is also considered as the "Mother of all Healings".

There are 2 main goals of Ayurveda: (1) To maintain the health of the healthy, and (2) To heal the sick. According to Ayurveda, life is a combination of four essential parts: mind, body,

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senses, and the soul. It just not limits the knowledge to body or physical symptoms but also provides a through knowledge regarding spiritual, mental, and emotional aspects. This traditional system of healing is based on the theory of balancing the body, the soul, and the mind. This balancing includes eating the right at the right time, adapting to daily lifestyle habits, daily meditation, and maintaining purity of mind and soul. There is a strong connection between mind and the body. It not only controls the process of thoughts but also helps the body in day-to-day activities such as respiration, blood circulation, digestion, and elimination (Raman 2003). Our physiology is regulated by the combined work of mind and body. The senses are used as information gatherers so that mind can act accordingly to the body. The clarity of senses helps the mind and body to integrate their functions so that the human beings can live a healthy and happier life. Before existing in the physical body, we exist in a more fine and delicate form known as the soul. We may take the shape and form of many physical bodies throughout the cycle of life and death but our soul remains unchanged.

The evolution of life form from the inception till birth also gives some idea of the dynamic changes taking place inside mother's womb (of course, it can be artificially created). The changes happening to the shape of two water drops (ovum and sperm) inside mother's womb from day one onwards till the birth of the child clearly shows the relation between the mind, body, senses, and the soul. Every form of live has these four basic elements. Thus Ayurveda takes care of the entire life cycle of human beings (Varier, P.S., 1993).

The present paper tries to find some answers to the following research questions; viz.; (1) Why is Ayurveda considered as a rejuvenating therapy for good health ?; (2) How and in what way has the concept of Ayurveda emerged in India and spread around the world ?; (3) What was the reason and how could the concept of Ayurveda flourish in Kerala ?; (4) What are the main problems faced by people working in the field of Ayurveda ?; (5) What is the linkage between Ayurveda and Health Tourism; i.e.; is there any possibility of generating awareness among people to combine traveling and health care, specifically to opt for Ayurvedic treatment ?; and finally; (6) What are the future potential of Ayurvedic health tourism for India ?.

The need of the hour is to identify some kind of developmental strategy. The success lies in providing the necessary rejuvenating ingredients to

Ayurveda; in turn Ayurveda will help in rejuvenating the health of people in the coming years. Once answers to the above questions are arrived at, it becomes easy to develop a marketing strategy for promoting Ayurveda with a view of generating awareness among people about Ayurveda, this will in turn make the people to travel for health care towards Kerala, and finally it will have a dual impact; firstly rejuvenating Ayurveda tradition in Kerala and secondly rejuvenating the health of people. By capitalizing on the transformational capability of social venture capital, Ayurveda tradition in India and elsewhere can be rejuvenated in the coming years.

ROLE OF AYURVEDA IN REJUVENATING HEALTH

There are innumerable examples of the rejuvenating capability of Ayurveda, but still those are not fully recorded and made academically available. The very idea of the present research paper was the result of the personal experience of the first author. It all started in the year 2002. In June 8th 2002 author was faced with the problem of inter-vertebral disc-prolapse. Due to severe pain, consulting medical practitioner advised to go for pelvic traction for five days during 28th June - 3rd July 2002. Instead of getting complete relief, the situation worsened. The spinal nerve got entangled between the discs, aggravating the pain and also resulting in walking disability. The author was facing a major mental trauma, walking continuously for 20 feet was not possible. Then on August 14th 2002, went to Goa Medical College for further treatment with the neuro-surgery department. The consulting doctor advised to do MRI of lumbo-sacral region for further investigation. To have a second opinion, the author went to Amrita Institute of Medical Sciences and Research Centre in Kerala. Being a Keralite and having known people working in medical profession there, the first choice was to go to Kerala. From August 20th 2002 onwards started consulting with the department of neurology. This went on for another 6 months; still there was no progress happening. The pain still continued and also the walking disability persisted. Then the doctors advised to take the MRI, and on February 10th 2003 it was taken. Investigation of MRI lumbo-sacral spine revealed that there was 'central posterior disc protrusion L4-5 level compressing the thecal sac'. It was suggested to go for Neurosurgery, but no guarantee of full recovery. The author decided not to go for surgery; as the end result could be permanent disability in walking and lifelong pain.

But fortunately within a period of two months, through word of mouth, one of the patients who underwent a similar situation mentioned about one Ayurvedic treatment center, which specialised in back pains. Since there were no other options available except Neurosurgery, and as a last resort on May 26th 2003, the author got admitted at the Sree Agasthya Medical Centre, Kerala.

On the first visit before getting admitted, the consulting doctor identified the problem without even checking the MRI report. This he done by simply moving his thumb over the spinal section, and he jokingly said that Ayurveda makes a medical practitioner identify the root cause of the problem by moving the fingers over the body and sensing the pulses, and it was completely true with the authors MRI report. The treatment started on 26th may 2003. It was for 21 days, the first 9 days was oil massage, making the body highly flexible so that corrections can be done with ease. The oil was a mixture of many medicinal herbs, which penetrates inside the body and makes the bone joints work in its original form. On 7th day the doctor done correction on the disc manually by twisting the body and putting back the prolapsed disc back to normal position by releasing the entangled nerves also back to normal position.

Then from 11th day onwards the second phase of treatment started, which is called 'Navara Kizhi'. This treatment is done to make the body strong, which was made flexible during the first 9 days of oil massage. The main ingredient of 'Navara Kizhi' is a special variety of rice (Navara Rice, now a day's being used as a facial mask by most of the beauty clinics in Kerala) boiled in medicinal herbs, then filling in to a cotton cloth sachet. These rice sachets are then put it in a big bowl filled with continuously boiling milk. Lying on a medicinal wooden table, six people will be using the rice sachets from the boiling milk to massage the body, both front side and back side of the complete body. This process will last for 20-30 minutes till the entire milk gets over. This procedure will be carried out for a period of 11 days. By the end of the 21st day, the disc problem was completely cured; in fact immediately after the correction process, the pain and walking disorder was completely over. On 16th June 2003 the author got discharged from the hospital; a completely recovered patient, it was almost like a second birth, in other words the life of the author was completely rejuvenated with in a period of 21 days of Ayurvedic treatment; i.e., 100% recovery with 0% side effects.

During the period from 26th May 2003 till

16th June 2003, there was a complete transformation of health condition. The author was impartial between Allopathic and Ayurvedic treatments, but the perception towards Ayurveda had been completely changed. Even with the educational background as a Keralite, the author was not having the full appreciation of the wonders of Ayurvedic treatments. This was even true with almost all the patients who were undergoing the treatment during the same time along with author. Most of the patients came to know about it through word of mouth, and the most interesting fact is that the majority of them were not from Kerala; many of them were from outside India (mostly from gulf countries). The author who had academic discussions with the doctor confirmed this. The rooms were always full, and one needs prior appointment for treatment. For many years they have been helping the patients to recover their health problems and rejuvenating their life, but still they don't follow any kind of modern marketing strategies.

This is one small Ayurvedic center in Kerala, where the success rate of the treatment has been almost 100%. The success of Ayurveda demands that for the treatment to be effective, all the four *Padas*; viz.; Bishak (the doctor), Dravyani (the medicines), Upasthata (the attender), and the Rogi (the patient); should have the desired qualities (Varier, R.R, 1997); and the above mentioned center was having all the qualifications required from all the four *Padas*, hence the success rate was 100%. One has to study all such similar Ayurvedic centers in Kerala to have a complete picture of the rejuvenating capability of Ayurveda in improving health. Thus one can say confidentially that Ayurveda does have the power to rejuvenate health of human beings even at the present time.

ORIGIN, DEVELOPMENT, GROWTH, DECLINE, AND REVIVAL OF MEDICAL PRACTICES (CAM & MM).

In the present world of information, the existence of literature on ancient medical practices followed during the early periods of human settlement is very scanty. From the available bits and pieces of information which got survived during the clash of civilisations during the early stage of human settlement and also the later part of European colonisation speaks about the origin, development, growth, decline, and also the revival of indigenous and ancient medical practices in Africa, Asia, and Middle East. A brief outline of the historical development of medical practices around

the world during 3500 BCE till 2008 ACE is provided in Exhibit 1, which is not an exhaustive list but an indicative one. And like in any other sector, health care sector also got prominence and paved the way for the development of different varieties of health care treatments/systems over the years among different regions as well as religions.

If we go by the argument proposed by Sawandi (2002), the credit of developing and practicing herbal medicines successfully (around 10,000 years back) is to be given to Africa, especially to Egypt. Traditionally, ancient African priests would orally transmit their herbal knowledge (from one generation to the next. Not only was African medicine passed from generation to generation, starting in ancient Egypt (Khemit), but from continent to continent. The only true African healing system which is still intact in its original language of African terminology is Yoruba medicine, which is widely practiced on the African continent as well South America, and the Caribbean. According to Sawandi (2002), When Greek physicians took their oath to Aesculapius, they were really swearing in to an African originally named Imhotep. During his lifetime, he was revered as the god of medicine between 2780-2680 B.C. Western society has wrongly given credit to a Greek named Hippocrates, who had actually taken the Aesculapius (Imhotepian) oath and lived 2,000 years after the true father/god of medicine. As per the available information about the origin of human civilisation

and the settlement, this argument may be true, but needs to be corroborated.

Sawandi (2002) also argues that origin and development of Ayurveda medicine (around 6,000 years back) in India is also the product of the esoteric philosophy of African medical practices from inner Africa carried over by the migrants from Ethiopia via Isthmus of Suez, who were the founders of Hinduism in India. This argument seems to be partly correct, because according to many scholars, knowledge of Ayurveda originated from India and influenced the ancient Chinese system of medicine and also medical system practiced in Greece (Varier, P.S 1993; Varier, M.R.R, 1993; Pushpangadan 2002; Shankar 2002; Katsambas and Marketos 2007). But nowhere it is mentioned that it originated from African system of medicine, except that it has a divine origin and was initially possessed by gods. It is believed that Lord Brahma, much before human beings came into existence, created Ayurveda. The concept of god originated around the world at different periods of time, mainly for the purpose of having some uniformity among the group of people and also to protect and safe guard the precious natural resources as well as to safe guard the knowledge base acquired at that time (Subhash et al 2008). If we go by this simple philosophy, the ancient settlers from African continent who came to India carried with them the ancient African medical practice and propagated in the form of Ayurveda by giving the divinity veil to the practice, but failed to

Exhibit 1: Development of Medical/Health Care Treatments/Systems [3500 BCE – 2007 ACE]

#	Period	Milestones / Landmarks	Clustering Regions / Countries	Medical / Health care Treatments / Systems
1	3500-2000 BCE till 1600 ACE	Early civilisations started in Sumerian / Ancient Egypt / India / Mincon / Neolithic	Middle East (3500-2500 BCE) / Egypt (2500-2100 BCE) / India (2500 BCE) / Mesopotamia (2000 BCE) / Central America (2000 BCE) / Then the emergence of European and Western Supremacy through colonisation	<ul style="list-style-type: none"> * Yoruba Medicine [around 10,000 years ago in Africa (Egypt)] * Acupuncture [around 6000 years ago in India and Egypt] * Ayurveda & Magnetotherapy [around 5000 years ago in India] * Siddha [around 5-1000 years ago in India] * Acupuncture [around 3500 years ago in India and China] * Acupuncture [around 3000 BCE in Macedonia and China] * Tibetan Medicine [around 2000 years ago in Tibet] * Yoga [around 900 BCE in India] * Hydrotherapy [around 500 BCE in Japan/China] * Clinical Medicine [around 460 BCE in Greece] * Unani [around 1025 ACE in Yunnan East]
2	16 – 1700 ACE	Agricultural revolution	Mostly in Europe mainly Britain, also in America and Japan	<ul style="list-style-type: none"> * Disappearance of Western Medicine / Home Medicine / Shamanic Medicine / Modern Medicine – Mostly in Europe [mainly based on Clinical Medicine developed from 460 BCE] * Magnetotherapy [around 17th century got revived in Switzerland]
3	17 – 1900 ACE	Industrial Revolution in Europe / Mass Colonisation of Asia, Africa, and Middle Eastern countries	Mostly in European countries, also in America, and also in Japan	<ul style="list-style-type: none"> * Osteopathy [around 1800 ACE in Germany] * Naturopathy [around 1880 ACE in Germany] * Allopathy [around 1900 ACE in Europe and America, as opposite to CAM]
4	1914-1945 till 1960's ACE	Power struggle in Europe led to WWI, and later on WWII	Mostly in Europe, America, Japan – also Russia, became socialist economy a power	<ul style="list-style-type: none"> * Ancient medical practices/systems got sidelined, mostly by force * Reiki [around 1922 ACE in Japan] * Revival of Prana: Healing, Qigong, Therapy, and Meditation in Asia and Europe
5	1950 onwards till 2008 ACE	New economic order / End of Colonisation / Oil became vital / Large amount of world / Middle Eastern problems	North America, Europe, Asia Pacific, Middle East & Africa, and Central and South America	<ul style="list-style-type: none"> * Countries regained independence from the clutches of European colonial powers [Asia, Middle East, and Africa] * Revival of ancient medical practices in those countries * Development of modern medicine and medical facilities in Asian countries * Growth of Health and Medical Tourism around the world * Countries in Asia have to open a restriction for Health care

Source: Subhash et al (2010).

mention about their exodus. But subsequently they recorded the spreading of ayurveda to other parts of the world. People from numerous countries came to Indian Ayurvedic schools to learn about this world medicine and the religious scriptures it sprang from.

The time line given in Exhibit 1 also gives a clear indication that the first ever medicinal practice started in Africa (mainly Egypt), then spread towards Asia (India, China, Tibet, Mongolia, and Japan), then to Europe (Greece, Switzerland, and Germany). As and when the knowledge of medicinal practice started spreading from one place to other, indigenisation of the knowledge paved the way for the development of various forms of medical/health care systems/practices in different regions. The origin of medical knowledge from Africa was not mentioned in any of the historical documents, but there are many references given about the link of Ayurveda teachings to the world of medicine. Learned men from China (Acupressure, Acupuncture, and Chinese Herbal Medicine), Tibet (Tibetan Medicine), the Greeks & Romans (Clinical Medicine), Egyptians (herbal medicine and aromatherapy), Afghanistans, Persians (Islamic Medicine and Unani), and more traveled to learn the complete wisdom and bring it back to their own countries. Ayurvedic texts were translated in Arabic and under physicians such as Hakim Ibn Sina (known as Avicenna in the west who lived during ACE 980-1037 developed Unani medicine) and Razi Sempion, both quoted Indian Ayurvedic texts, established Islamic medicine. This style became popular in Europe, and helped to form the foundation of the European tradition in medicine. In 16th Century Europe, Paracelsus (Swiss alchemist propagated Magnetotherapy in Europe), who is known as the father of modern Western medicine (Allopathic), practiced and propagated a system of medicine, which borrowed heavily from Ayurveda. Thus, Ayurveda is also considered as the "Mother of all Healings".

During the *first* stage (3500 BCE – 1600 ACE) and *second* stage (1600 – 1700 ACE) of history of mankind, most of the medical/health care systems/practices developed in different parts of the world. But the drastic change happened in the history of medicine is the decline (mostly by force) of ancient medical practices (CAM) in Asia, Middle East, and Africa during the *third* stage (1700 – 1900 ACE). This is the direct result of the industrial revolution started in European region which resulted in mass colonisation of countries in Asia, Africa, and Middle East by European countries to ensure steady supply of raw materials for the

industries in Europe. In a way almost 75% of the countries around the world were under the control of Europe. The clinical medicine developed in Greece (around 460 BCE in Europe) got prominence and witnessed a spontaneous growth, spread across Europe, which resulted in branding this branch of medicine as Western Medicine / Biomedicine Scientific Medicine / Modern Medicine during 1600-1700 ACE, subsequently Hippocrates was sworn in as the "Father of Medicine". Thus during the *third* stage, the indigeneous medicinal systems practiced in Asia, Africa, and Middle east got sidelined by the mass colonisation by European countries. This being the case elsewhere a new system of medicine (Homoeopathy) got developed by Samuel Hahnemann in Europe (Germany) around 1800 as an alternative of the then existing clinical medicine in Europe. This clearly indicate the power with which the European colonial powers tried to suppress the development of the indigeneous medical systems practiced (mainly labelling them as witchcraft / black magic) and forcefully imposing the clinical as well as homoeopathy medicinal systems in the colonised countries. During the *fourth* stage (1914-1945 ACE) Reiki was developed in Japan (one of the super powers at that time). In the *final* stage (1960 onwards) world witnessed the end of coloniasation and along with this came the revival of the indigeneous medicinal practices in Asia, Africa, and Middle East. Among all other CAM's, Ayurveda got more prominence and became very popular in India and also abroad. And during the last two or three decades, the development and growth of health/medical tourism activities around the world paved the way for overall development of Ayurvedic treatment facilities to cater the needs of patients coming for health care needs.

PRESENT SCENARIO OF AYURVEDIC CENTERS IN KERALA:

Though there are more than 300 centers working presently in Kerala, only around 50% of them are having the traditional lineage; i.e.; having a long family history of being in Ayurvedic practice for at least a minimum period of 100 years. The emergence of the other 50% Ayurvedic centers is the direct result of the impact of tourism. Those falling under the first category are of the opinion that this mushrooming of Ayurvedic centers because of the impact of tourism is in a way a negatively affecting the promotion of traditional Ayurvedic centers. The main reason for this argument is that it requires a minimum of 9-12 years of experience for a person to become an excellent Ayurvedic practitioner. Since

there are many training centers offering crash courses (many are having less than 1 year duration), the quality of treatments offered by those who come out of these training centers are slowly deteriorating.

Secondly the promotional strategy of these centers is not to give any special Ayurvedic cures, but only "Suga Chikiltsa", in other words just to give different varieties of massages. Though this falls under one of the goals of Ayurveda, which is mentioned at the outset of this article (i.e.; to maintain the health of the healthy), the traditional practitioners are not seeing it as a healthy practice in the long run. Most of these non-traditional centers are having some tie ups with tour operators as well as the hotel industry, whereby they can access customers (tourists); in return all the players obtain hefty amounts of profit by charging differential pricing for foreigners.

Since the strength of Ayurvedic treatment centers in Kerala is known worldwide and also the Kerala Tourism Development Corporation (KTDC) uses it as a marketing strategy for promoting tourism in Kerala, tourists are attracted towards having some experience of Ayurveda. This is evident from (1) the package tours offered by many of the tour operators, (2) opening up of many Ayurvedic resorts and also (3) the starting up of Ayurvedic spa's in many star category hotels. Discussion with some of the traditional Ayurvedic centers; viz.; Kottakkal Arya Vaidya Shala, Sree Agastya Medical Centre; and CVN Kalari Kendra; helped to identify some of the problems faced by the Ayurvedic centers in Kerala that needs to be tackled properly by conducting an extensive survey. Various problems are summarized as follows.

a. Difficulty in uniformity in medicinal formulations:

Since there is complete absence of the concept of patents in Ayurveda, any one with basic knowledge of medicinal herbs can make the formulations as per their choice. There are huge numbers of pharmaceutical firms (both recognised as well as unrecognised) in the market that manufacture the formulations and sell it in their name. This resulted in deterioration in the quality of Ayurvedic medicines, which in turn adversely affects the reputation of Ayurveda in the long run. Low and inferior quality may lead to dissatisfaction among customers, which in turn makes them not to become loyal to Ayurvedic treatments in future (Varier, 1996; Sankarankutty, 1997). This is the direct result of the negative impact of tourism, i.e.;

the increased demand resulted in mushrooming of centers by inexperienced entrepreneurs. Most of the traditional practitioners are of the opinion that the government should take appropriate initiatives to curb the mushrooming of Ayurvedic centers by inexperienced entrepreneurs.

Another aspect to be considered here is the access to technological development taking place in medicinal formulations. Many of the small and medium firms (except very few large scale manufacturers) still use the traditional technology for making Ayurvedic medicines. Adequate support to be provided for such firms in modernizing their technology to cope up with the increased demand as well as maintaining the high quality standards to remain in the industry, else many of them will cease to exist in the near future (Varier, 1996).

In spite of the above-mentioned drawback, Kumar (2002) sees a bright future in the area of Ayurvedic medicinal preparations. The future products of Ayurveda will be packaged in such a way that they not only have longer shelf life but also more users friendly. Some traditional Ayurvedic medicine manufacturers are already using capsules, tablets, etc. It is quite clear that future Ayurvedic products will incorporate more knowledge of contemporary biology, chemistry, and also biotechnology. Apart from improved characteristics and standardization, there will be entirely new preparations based on plant sources available internationally.

b. Shortage of traditional training centers:

Though there are almost over 150 traditional Ayurvedic treatment centers presently working in Kerala, very few are offering any formal training programmes. Most of the traditional centers are of the opinion that they have been following the age-old traditional training system for imparting knowledge. Those who want to become Ayurvedic practitioners should become students of the center; they have to undergo the rigorous training for at least 9-12 years to gain the accurate knowledge of human body chemistry. Those who come out of the traditional training system can effectively fulfill the two goals of Ayurveda; i.e.; (1) to maintain the health of the healthy, and (2) to heal the sick.

Many of the newly started training centers offering the short-term crash courses on "Suga Chikiltsa" are not properly imparting the knowledge. They are claiming that the training enables a person to practice Ayurveda for maintaining the health of the healthy, but it is like half knowledge; which will create more problems

than maintaining the health of the healthy. Only through traditional training one can completely master the Ayurvedic treatment skills, because rectification of problems during the treatment phase can be done only if the person knows how to heal the sick, which is completely ignored by the non-traditional centers (Sankarankutty, 1997). It has become a lucrative business in Kerala, because of the unemployment problems presently exists. Though there are many government recognized Ayurvedic medical colleges offering medical degrees on Ayurveda, it is not sufficient to cater the needs of both the students community as well and the Ayurveda training centers. If government takes proper initiative, entire problems can be completely controlled. This being the case, the popularity of Ayurveda and demand for Ayurvedic medicines are increasing rapidly all over the world.

c. Reluctance of entering into tie-ups with tourism and hotel industry:

Though the flow of tourists to the traditional Ayurvedic centers are on an increasing scale, most of the traditional centers are not having any formal tie ups with the tourism and hotel industry. *Firstly*, most of these centers are having high demand from the domestic market, they are of the opinion that there is no need to having any formal tie ups. Since the traditional centers are known worldwide, tourists are arranging appointments much in advance. *Secondly*, the tour operators as well as the hotels are also arranging the Ayurveda treatments for the tourists with the traditional centers in the tour package that they offer to tourists.

The main reason for not having a formal tie up is also because of the social responsibility aspect practiced by traditional centers. Most of these centers still believe that Ayurveda should be practiced as a service to society, and not as a profit making mechanism. This is because of the traditional training system they follow, which imparts the knowledge that the basic philosophy of Ayurveda is to make people healthy and not to make profit out of this. Many of the traditional centers still charge nominal fees for the treatments, and don't follow any differential pricing policy between domestic and foreign patients.

In contrast to this, most of the non-traditional centers are having formal tie ups and also follow differential pricing between domestic and foreign tourists. Since most of the foreign tourists have not the problem of paying high prices to those non-traditional centers (due to currency conversion benefits). This in turn led to a mushrooming of

training centers and also non-traditional Ayurvedic centers all over Kerala (Sankarankutty, 1997). Here too government can take initiatives in making some minimum standard norms for starting Ayurveda training as well as Ayurvedic treatment centers.

d. Reluctance to intensify marketing:

As is already mentioned above since traditional Kerala Ayurvedic treatments are known worldwide, most of the traditional centers are not in favour of adopting any kind of advertising strategy. Present advertising is mostly in the form of simple brochures, briefly giving centers mission and the strength acquired over the years. As most of the centers have loyal customers (patients), they are not in favour of intensifying advertising. Some of the traditional centers have their own web sites, providing basic information about their centre as well as various treatments offered. They are not in favour of going for extensive advertising campaigns to canvass for more customers, because the infrastructural facilities are not sufficient for supporting huge numbers of customers at a time. Most of the traditional centers are of the opinion that the service they provide needs no advertising, and people will come for the treatment on its own. They still believe in the traditional advertising policy; i.e.; word of mouth, satisfied customers brings in more customers. This will ensure the quality practice, which in a way will prevent the mushrooming of non-traditional centers in the long run. But in contrast to this, many of the non-traditional centers are following extensive advertising in the print and visual media.

e. Inertia of going for expansion:

Since traditional Ayurvedic centers are not in favour for major expansion, the increased demand for Ayurvedic treatments due to health tourism led to the opening up of many nontraditional training as well as Ayurvedic treatment centers.

Firstly, the reason for the inertia is mainly due to the shortage of trained people. As has already been discussed earlier, there are very few takers for the traditional training programmes in comparison to the non-traditional crash courses. *Secondly*, even if there are qualified personnel, getting finance and infrastructural facility for the expansion is slightly difficult. Many of the traditional centers are not in favour of going for borrowing huge funds for expansion.

Thirdly, the awareness concerning the concept of *venture capital* (today gaining in prominence around the world, and Social Venture

Capital is being used for promoting Ayurveda) is very low. Even if they are aware, none of the traditional centers are in favour of converting their traditional family oriented Ayurvedic practice into a company form of organisation where ownership is being sold in the form of securities to venture capitalists. Since they believe in upholding family traditions, they have the feeling that the controlling power may be lost if they go for venture capital financing, which in turn adversely affects the century old family tradition. Most of the traditional centers are owned and managed by family members only, whereby they are able to keep their knowledge as a secret among themselves, which they have been successfully doing for many centuries. The success of many of the traditional centers is the direct result of family secrets of Ayurvedic medicinal formulations and treatments.

But in contrast to this, non-traditional centers are expanding their operations. One can see the growth of these non-traditional centers in and around Kerala, other parts in India, and also abroad. Very few traditional centers took the initiative of expanding their operations and now they have established their operations in Kerala, some tried to expand into other states in India, very few ventured abroad.

f. Inadequate supply chain and logistics management:

Since Ayurveda heavily depends on medicinal herbs available in the natural habitats (mostly in forest areas), the supply of these medicinal herbs is becoming a major constraint (Larsen and Olsen 2007). Since there is huge demand for the Ayurvedic formulations, getting raw materials creates a real challenge for the traditional centers. Though there are attempts from some private players to grow the herbs on a commercial basis, it is not sufficient to cater to the increased need (Varier, 1996; Sankarankutty, 1997).

Another problem is about the transportation and storage; i.e.; the medicinal properties of the herbs gets diluted if they are not processed within a certain specific period. Many of the traditional centers are not having sufficient storage facility, hence it becomes difficult for them to buy in bulk and store it for future use. All this leads to reduction in quality of Ayurvedic formulations, older generation of people (above 60 years) in Kerala are of the opinion that the present Ayurvedic formulations are not as effective as before.

Even about transportation one needs to focus so that the herbs are made available to the centers as

and when they are in need. Appropriate logistics needs to be worked out in such a way that herbs are reaching the destination without losing their medicinal properties. Hence storage and transportation to be handled side by side for achieving excellent supply chain management system for Ayurveda is becoming increasingly important.

There should be some kind of mechanism to make sure that herbs are cultivated in its natural habitats to the extent possible; or support the commercial cultivation of herbs on a large scale. Once this is done, future supply of herbs can be assured, otherwise with in a very short time, the entire supply of herbs becomes extinct; ultimately making the Ayurveda treatments highly difficult as well as exorbitantly priced and out of the reach for the majority of people.

Presently very few traditional Ayurvedic centers are having their own herbal farms, but the supply is not even sufficient to cater the demand for their products. As most of the traditional Ayurveda practitioners are of the opinion that Kerala Tourism Development Corporation (KTDC) is using Ayurveda as well as Kalarippayattu (a variant version of Ayurveda focuses on martial art as well as massages) a marketing strategy for promoting tourism in Kerala, KTDC have the moral responsibility of uplifting and supporting both traditions. The present goodwill and reputation, which is enjoyed by these two traditional practices, are not because of the support from government, but merely represent struggles of the forefathers of the traditional Ayurvedic treatment centers. This makes the argument made by the traditional practitioners even stronger. Major initiatives should come from the government side for solving all the problems associated with Ayurveda, especially regarding the supply chain aspects; the lifeblood of Ayurveda. It is high time now that governments take timely action for promoting and maintaining the Ayurveda tradition in its full strength; else they do not have the moral right to use the Ayurveda and Kalarippayattu for generating revenue. One portion of the revenue generated should be kept aside for Ayurveda developmental plans.

HOW HEALTH TOURISM CAN BE USED FOR REJUVENATING AYURVEDA BY CAPITALIZING ON SOCIAL VENTURE CAPITAL

There are 2 main goals of Ayurveda: (1) To maintain the health of the healthy, and (2) To heal

the sick. Making use of these; government of Kerala can play a great role in helping Ayurveda to get rejuvenated by marketing the product as a health tourism product to prospective customers (both domestic as well as international). But care should be taken while promoting; because health tourism customers should be informed about the recognized treatment centers in Kerala well in advance. There is lot to be done before reaping the benefits, mainly helping all Ayurvedic centers to overcome the problems they are facing now, and then only these centers can provide excellent health care services to customers. Since most of the Keralite's are aware about the difference between traditional as well as modern Ayurvedic centers, no Keralite's will spend money on those centers not having properly trained staffs. Thus the need of the hour is to make modern centers to acquire sufficient training and expertise. Appropriate action should be taken against such centers not fulfilling required trained staff.

During this era of globalization of Ayurveda, there are many areas to be looked after properly and intensive research work in fundamental aspects, quality control of Ayurvedic medicines, availability of raw materials in required quantity, clinical efficacy studies in life style diseases, etc are important (Mishra, 2002). But most crucial area for urgent action is education in Ayurveda, which needs revitalization at every level. In Kerala, though Ayurveda courses are offered both by private as well as from public sector, more than 50% of the colleges offering such courses in India are in the states of Maharashtra and Karnataka. Thus Kerala needs to focus on providing much needed infrastructure for promoting more Ayurveda educational institutions so as to meet the increased demand of trained Ayurvedic practitioners to cater the potential and prospective health tourism needs in the near future.

And finally the transformational capability of social venture capital can also be capitalized on for rejuvenating the Ayurvedic tradition, and it is happening in Kerala also. There are many social entrepreneurs around the world having the idea of providing social venture capital for economic transformation in the rural areas of under developed and developing countries (BOP, 2008; SVC, 2008a; Glasner, 2008; Tiku, 2008 and NEF, 2008). Social venture capital is a form of venture capital investing that provides capital to businesses deemed socially and environmentally responsible intended for providing attractive returns to investors and to provide market-based solutions to social and environmental issues (SVC, 2008b). Though it is not clearly specifying the rural economy

transformation, many social venture capital funds are focusing on rural developmental issues. As it is rightly pointed out that social venture capitalists are those new breed of venture capitalists interested in and also willing to consider unusual models of business ideas.

There are many social venture capitalists around the world, of which one such social venture capital fund is Acumen Fund (a nonprofit venture philanthropy fund that invests in social enterprises addressing poverty in South Asia and Africa), one among the top 45 social entrepreneurs who are trying to change the world (Collaco and Subhash, 2008). One of the social entrepreneurial investment success stories of Acumen Fund in India (specially in Kerala) is AyurVAID Hospitals (equity investment of Rs. 4.5 crores), which focuses on offering affordable healthcare services to low-income communities, enhancing both the quality and the accessibility of medicare available through its 'AyurVAID Seva' program (AyurVAID 2008a and 2008b). This institution combined the traditional Ayurveda with the modern medicine and is a successful one from inception and now they have six hospitals in India providing health care services to needy people, both in the domestic market as well as international, and also to all income strata. It is a clear indication of social venture capitalists changing attitude towards assisting socially responsible, economically viable, as well as having potential in solving social problems (issues, which is considered as opportunities) business ideas. Though this is in health care area, a potentially viable business proposal can be devised in promoting rural tourism, which attracts social venture capitalists. There is great potentiality in promoting health tourism specially integrating Complementary Alternative Medicines (CAM, where Ayurveda is prominent) and Modern Medicines (MM) which many countries (including India) is trying to capitalize on in the coming years (Subhash, et al 2008; 2009) and rural herbal medicines can also be used as one of the rural tourism product/service. By capitalizing on the transformational capability of social venture capital, CAM (especially Ayurveda tradition) in India and elsewhere can be rejuvenated in the coming years.

HEALTH TOURISM IN THE WEST: TRENDS AND PERSPECTIVE FOR INDIA.

In many Western European countries health and health related sectors such as health tourism have become mega branches of economic activity

(Nefiodow 2001). There are three, possibly four factors, which have accounted for this development. World and in particular European aging has been and continues to be progressing at a rapid rate with all of its implications from the maintenance of health, to changed patterns of leisure activities to the financing of alternative national systems of retirement (Weiermair 2005, 2006). At the same time, the cost of health in many Western national health systems have escalated leading to huge budget deficits with the result of ever increasing cost of both private and public health care. Many of today's health problems are diagnosed as resulting from psychosomatic and life style related reasons of stress, anger and frustration associated with increased pressures from work, family and society at large (Greenberg et al, 1997). A possible fourth reason is the secular decay in healthy eating habits. Classical medicine with its specialization on surgery and pharmaceutical treatment has in many cases been unable to respond with effective treatments. As a consequence homeopathic treatment to prevent and cure a number of illnesses has increased appreciably wherever it has become licensed. In this context Horx, a German futurologist speaks of the 21st century as "the century of therapies" (Horx 2001, 2002).

Thus the combination of escalating national cost of health, aging, the rise of alternative medicine and associated time and cost constraints for leisure/tourism activities have made health tourism for the aged and increasingly also for younger market segments a booming business (Goodrich & Goodrich 1991, Moutinho 2005, Foot 2006). Today almost all European destinations offer some type of wellness product along with their traditional cultural, sports and entertainment tourism products. In some cases and in order to provide unique selling propositions to tourists new products have been developed such as in the case with "alpine wellness" (Theiner & Steinhauser 2006). Given India's cost competitiveness in the health and tourism industry and given its long-standing tradition, expertise in "authentic Ayurveda" treatment, as has been described in the first part of this paper health tourism in India is forecast to become a fast rising sub sector of tourism. Before this will happen much has to be done as yet in terms of both broadening the scope of Ayurvedic treatment within the tourism industry in India and with respect to better marketing and branding it internationally.

CONCLUSION

According to Becvar. Et al (1998), at the forefront of revolutionary changes in health care delivery is the emergence of practices, which have been inconsistent with and to date excluded from conventional allopathic medicine. Sometimes called unconventional, unorthodox, traditional, or folk healing, these alternative practices encompass a broad range of health promoting behaviors. These practices are now being designated as Complementary Alternative Medicine (CAM). The term Complementary / Alternative / Non-conventional medicine are used interchangeable with traditional medicine in some countries (Muraleedharan, 2002). But in the present globalised scenario, the world is turning green, as more and more people the world over prefer plant-based medicines, which is generally known as herbal medicines (Pushpangadan, 2002). The World Health Organisation estimated that 80% of the world population relies on traditional medicine for primary health care, and also the use of plant remedies is on the increase even in the developed countries especially among younger generation. The main reason for this is nothing but the urge of human nature for longevity; i.e.; enjoying a healthy life to the extent possible during the lifetime; which spring from the basic human instinct of multitude of needs/wants and limited means, specially the life span (Varier, P.S, 1993).

Though the history reveals that Ayurveda is considered as "Mother of all healings", it is being considered as Complementary Alternative Medicine (CAM) among the Western and European medical practitioners. But there is a gradual shift is happening from allopathic medicine towards CAM in general and towards Ayurveda in particular in Kerala. In the industrialised countries, the consumers are seeking visible alternatives to modern medicine, which has its associated dangers of side effects and over medication (Pushpangadan, 2002). The promotive and preventive aspects of oriental medicines (CAM), especially of the Indian - *Ayurveda*, *siddha*, *unani*, and *amchi*; Tibetan; and Chinese systems are finding increased popularity and acceptance in the developed countries. It is estimated that one of every three Americans makes recourse to some CAM services with an estimated 425 million annual visits to providers of these services at a cost of 13.7 billion dollars per year (Eisenberg et. al 1993). Indeed, in US, more visits per year are made to CAM providers than to primary care physicians, especially among

the Asian Americans (Mehta, et al 2007). Factors contributing to the increased use of CAM services include their lower cost; their success in treating some diseases, particularly chronic and terminal illnesses, that do not respond to allopathic approaches; the support provided for self-responsibility in making health care choices; the emphasis on health promotion; and degree of success in treating high levels of chronic and acute stress (Murray & Pizzorno, 1998).

Though between health tourism and medical tourism no major difference exists, health tourism has been in existence from 2000 BCE onwards and medical tourism is of recent origin (Hunter, 2007). But in the present situation, both terms are being used interchangeably and also can be integrated effectively. Thus around the world the concept of health tourism is gaining prominence mainly due to inefficiency, ineffectiveness, and consumer unfriendly nature of the health care system existing in developed countries (Herzlinger, 2006). Thus in the coming years people from developed countries will travel towards other regions for the purpose of enhancing health and general well-being. If deliberate attempt is made to attract tourists by promoting healthcare services and facilities in addition to regular tourist facilities (Gooderich, 1991), the full potential can be exploited. Along with this Europe is expected to have eight of the ten countries worldwide with the highest percentage of people over 60 (Garcia-Altes, 2005). Over the last few years, the focus of health care tourism has been on the international market (Gooderich, 1991, and Henderson, 2004) mainly because of the long waiting time and also high cost presently existing in developed countries to get the medical services (demand side). On the supply front, hospitals, clinics, spa resorts and tourist operators in developing Asian countries, such as Malaysia, Thailand, Singapore, the Philippines and India are eager to expand their service offering to foreign customers (Zarrilli, S. et al, 1998, and Hunter, 2007). Essentially, they are exploiting their advantages of "lowercost skilled personnel, cultural factors, natural endowments and unique forms of medicine" (Zarrilli et al, 1998). Several European countries, for example, Hungary, Poland and Slovakia, are also striving to specialize in health care tourism (Garcia-Altes, 2005). To reap the benefits of the future of demand for health tourism products/services, the environment should give opportunities for continuous innovations (Brooker, and Go 2007). Everything put together, India in general and Kerala in particular can make use of Ayurveda as a health

tourism product/service to attract the tourists coming for health care facilities.

The new mantra, which is being practiced around the world in the case of health care, is "Old is Gold" or in other words "Back to Veda's". Thus considering the recent developments taking place around the world towards Ayurveda, if the authorities take timely care (both private as well as government), Ayurveda can be effectively marketed (both domestically as well as internationally) as a health tourism product. But the ultimate success lies in developing a marketing strategy for promoting Ayurveda with a view of generating awareness among people about Ayurveda, this will in turn make more people to travel for health care towards Kerala, and finally it will lead to dual impact; *firstly* rejuvenating the Ayurveda tradition in Kerala, and *secondly* in turn Ayurveda helps in rejuvenating the health of people

This paper concludes that health tourism, around the world in general and India in particular, will certainly become more significant in the near future. Proper initiative should be taken by the authorities for promoting Ayurveda as a unique health tourism product with zero-side effects which in turn attracts more people resulting in development of profitable and sustainable tourism industry in the region. By capitalizing on the transformational capability of social venture capital, complementary alternative medicine, especially Ayurveda tradition in India and elsewhere can be rejuvenated in the coming years.

REFERENCES:

- AyurVAID (2008a). "Ayurveda overview". Information provided by AyurVAID Hospital, which provides medical facilities to rural people by appropriately integrating classical Kerala Ayurveda with modern medicine. <http://www.ayurved.com/> last checked on 20th August 2008.
- AyurVAID (2008b). AyurVAID Hospitals Receives Investment from Acumen Fund, To Provide Nation-wide Affordable Medicare for Chronic Illnesses: Developing a Viable Business Model for Affordable Healthcare. <http://www.ayurved.com/> last checked on 20th August 2008.
- Becvar, Dorothy S; Cook, Cynthia A. Loveland; and Pontious, Sharon L "Complementary Alternative Medicine: Implications for Family Therapy". *Contemporary Family Therapy*. 20/4. p 436-456. 1998.
- BOP (2008). Alleviate world poverty. Do not treat the poor as victims or as a burden. Explanation of Bottom of the Pyramid of C. K. Prahalad. http://www.12manage.com/methods_prahalad_bot

tom_of_the_pyramid.html last checked on 20th August 2008.

- Brooker, Edward and Go, Frank M (2007). "Sea, Sand, and Surgery - The Role of Disruptive Innovation at RP Care". Unpublished Case Study of Rotterdam School of Management, Erasmus University, Netherlands.
- Collaco, Tyslin and Subhash, K. B (2008). How to Change the World: Role of Social Entrepreneurship. Working Paper. Department of Commerce, Goa University, India.
- Eisenberg, D. M., Kessler, R. C., Foster, C., Norlock, F. E., Calkins, D. R., & Delbanco, T. L. (1993). "Unconventional Medicine in the United States". *New England Journal of Medicine*, 328(4), p 246-252.
- Foot, D (2006). Tourism and Education in Western Europe: A Demographic Perspective. in Weiermair, K; Pechlaner, H; Bieger, T (eds) Time Shift, Leisure and Tourism. Berlin: ESV, p 31-48.
- Garcia-Altes, A. (2005). "The Development of Health Tourism Services". *Annals of Tourism Research*. 32/1. p. 262-266.
- Gooderich, J. and Gooderich, G. (1991) "Health Care Tourism", in Medlik, S. (ed.) Strategic Managing Tourism, Oxford: Butterworth-Heinemann, pp. 107-114.
- Greenberg, J.S., Dintiman G.S. and Myers-Oakes B. (2007), "Wellness: Creating a Life of Health and Fitness", Boston: Benjamin Cummings Prentice Hall.
- Henderson, J. (2004). "Healthcare Tourism in Southeast Asia". *Tourism Review International*. 7(3/4). p. 111-121.
- Herzlinger, R. (2006). "Why Innovation in Health Care Is So Hard". *Harvard Business Review*. 84/5. p. 58-66.
- Horx, M. (2001). Was ist Wellness? Anatomie und Zukunftsperspektiven des Wohlfühlrends. München: Das Zukunftsinstitut GrK.
- Horx, M. (2002). Die acht Sphären der Zukunft. Ein Wegweiser in die Kultur des 21. Jahrhunderts. München: Signum.
- Hunter, William Cannon (2007). Medical Tourism in the Asia Region. UNWTO Asia Pacific Newsletter. 7. p 9-10.
- Kumar, R. (2002). "What the Future Holds for the Ayurvedic Drug Scene". Paper presented at the Centenary Seminar, February 24-25 2002, Kottakkal Arya Vaidya Sala, Kerala, India.
- Larsen, Helle Overgaard and Olsen, Carsten Smith (2007). "Unsustainable Collection and Unfair trade? Uncovering and Assessing Assumptions Regarding Central Himalayan Medicinal Plant Conservation". *Biodiversity Conservation*, 16/6, p 1679-1697.
- Mehta, Darshan, H; Phillips, Russel.S; Davis, Roger.B; and McCarthyl Ellen.P (2007). "Use of Complementary and Alternative Therapies by Asian Americans. Results from the national Health Interview Survey". *Journal of General Internal Medicine*, 22, p 762-767.
- Mishra, S. K. (2002). "Status and Strategies for Ayurvedic Education in India and Abroad". Paper presented at the Centenary Seminar, February 24-25 2002, Kottakkal Arya Vaidya Sala, Kerala, India.
- Moutinho, L. (ed) Oxford CAB International und Henderson J (2005) "Health Care Tourism in South East Asia". *Tourism Review International*. 7(3/4) p.111-121
- Muraleedharan, P. (2002). "Interfacing between the Traditional Health Care Approach and the Modern Developments". Paper presented at the Centenary Seminar, February 24-25 2002, Kottakkal Arya Vaidya Sala, Kerala, India.
- Murray, M., & Pizzorno, J. (1998). Encyclopedia of Natural Medicine (2nd ed.). Rocklin, CA: Prima Publishing.
- NEF (2008). Social Investment for Community Development: Completing the half-built house. Report written by Jessica Brown and edited by Mary Murphy. New Economics Foundation.
- Nefiodow, I (2001). Der sechste Kontradielf. Wege zur Produktivität und Vollbeschäftigung im Zeitalter der Information. Bonn: Rhein Sieg Verlag.
- Pushpangadan, P. (2002). "Future of Herbal Medicines". Paper presented at the Centenary Seminar, February 24-25 2002, Kottakkal Arya Vaidya Sala, Kerala, India.
- Raman, Varadaraja. V (2003). "Some Hindu Insights on Global Ethic in the Context of Diseases and Epidemics". *Zygon*. 38/1, p 141-145.
- Sankarankutty, P (1997). "Ayurveda Chikiltsarangathe Innathe Prashnangal". Paper presented at the XXXIII Ayurveda Seminar, January 30 1997, Kottakkal Arya Vaidya Sala, Kerala, India.
- Shankar, Darshan. (2002). "The Need for Reviving Traditional Knowledge Base". Paper presented at the Centenary Seminar, February 24-25 2002, Kottakkal Arya Vaidya Sala, Kerala, India.
- Singh, Anuradha (2007). Action and Reason in the Theory of Ayurveda. AI & Society, The *Journal of Human-centered Systems*, 21(1/2), p 27-46
- Subhash, K.B; Weiermair, Klaus; George, Vinu; and Vinod Kumar, K. P (2008). "Back to Vedas: The New Mantra for Rejuvenating the Ayurveda Tradition. A Case Study of Health Tourism Prospects for Kerala and India in the 21st Century". Paper presented at the National Conference on "Operations and Management Practices in Indian Hotel Industry: Prospects & Challenges"; Organised by Centre for Mountain Tourism and Hospitality Studies; HNB Garhwal University; Srinagar Garhwal; Uttaranchal. (January 9-10, 2008).
- Subhash, K. B; Smitha Govindas Bhandare; Weiermair,

