



Review Article

AYURVEDIC PRODUCTS AND SERVICES FOR HEALTH TOURISM NICHE IN INDIA AND THE CONTAMINATION OF AYURVEDIC CONTENT

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ABSTRACT

In past few years India has originated as one of the most important hubs for health tourism. There are several pull factors like excellent health facilities, low cost, easy accessibility, picturesque locations for excellent holiday etc. Globalized and modernized practices derived from Ayurveda traditions gave impetus to health tourism. Ayurvedic science is a monumental contribution of India to the world. Its main objective is preventive health care along with disease cure. The main attraction for tourists is rejuvenation promised by *Yoga* and Ayurvedic massage. Kerala is hub of health tourism just because of *Panchkarma* therapy. Despite it, ideal geographic location, salubrious climate and *Samhita* based approach are the other key factors. Other potential and developing fields in Ayurveda for Health Tourism are *Swasthvritta* (lifestyle modification), *Pathya-apathya* (dietary habits/Nutrigenomics), *Garbha Sanskara* (having a healthy and desired progeny), infertility management, *Rasayana* (rejuvenation), *Vajikarana* (aphrodisiac) etc. Ayurvedic medicines are herbal or herbo-mineral. Lack of identification, availability, proper collection and processing of herbs are the major hurdles that lead to contamination and affect the potency of preparation. Mineral compounds must be processed strictly following the guidelines mentioned in Ayurvedic texts. Otherwise, heavy metal contaminants left in the preparation might cause metal toxicity in consumers. Strict adherence to “Drug Standardization Protocols” is the need of hour by drug manufacturing units to remove the taboo of metallic toxicity and placebo for Ayurvedic preparations globally.

INTRODUCTION

Ayurveda is the science of life. Objectives of Ayurveda are maintenance of positive health and treatment of diseases. *Aturavrittam* (treatment of diseased) is based on *Tridosha* and *Panchbhutik* framework. *Swasthavrittam* (maintenance of health) is based on socioeconomic adjustments, modification of personal habits, control of infection and pollution etc.^[1] Ayurveda is an ancient healing system developed in India during the Vedic age.

It is one of the oldest and most evolved forms of medicine in the world.

Positive Impact of Ayurveda on Western World

Since, last two- or three-decades, Ayurveda has been becoming popular in the west. The primary reason is unlike other medical practices, the treatment of Ayurveda focuses on holistic healing of the body rather than treating only the disease or the diseased part. Many universities abroad are offering courses in this field as alternative medical practices. Finally, Ayurveda is getting attention and respect it deserves. Ayurveda courses are being provided in USA at California College of Ayurveda, American Institute of Vedic Studies and similar institutes all across the world. There are also conferences and seminars held around the world for Ayurveda. Ayurvedic literature has been interpreted into German, Arabic, Latin and many other foreign languages. As a result of growing

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popularity of Ayurveda worldwide demand of herbal products has grown by 8%.

With the advancement in technology though we are living more lavish lifestyle yet we are facing certain diseases as simple as obesity or anxiety or certain newer diseases that were never known to us previously as aftermath. Ayurveda is showing promising outcomes in dealing all these ailments without any side effects; hence people are adopting Ayurveda. About 75%- 80% of the population of Nepal make use of the Ayurveda and it is most adopted form of medicine in the country. The Sri Lankan tradition of Ayurveda is alike to the Indian tradition. Outside the Indian subcontinent, in western world, Ayurveda therapies and practices have been integrated in general wellness application. Ayurveda has been advertised as alternative medicine in the western world. Due to different laws and regulations in the rest of the world therapeutical use of Ayurvedic preparation is not allowed for example in USA, the practice of Ayurveda is not licensed or regulated by any state. The European Union directive restricted the sale of herbal medicines throughout Europe and has severely decreased the practice of Ayurveda throughout the continent. Thus, there has been an undesirable outcome of banning most Ayurvedic medicines from EU countries with effect from 1st May 2011.^[2] Despite these hurdles people in western world still prefer to seek holistic treatment of their ailments. It's a great opportunity for India to promote Ayurveda as part of tourism which would be a lucrative offer to foreign tourists.

DISCUSSION

Health Tourism- Medical tourism is initially coined by travel agencies and the mass media to draw the rapidly growing practice of travelling across international borders to prevail health care. It also mentions pejoratively to the practice of health care providers. In past few years, India has come out as one of the most prime hubs for medical tourism. Advantages of medical treatment in India include reduced costs, the availability of latest medical technologies, growing compliance on international quality standards and English- speaking personnel, due to which foreigners are less likely to face language barrier in India.^[3]

Moreover, the country has many picturesque locations ranging from sea, desert, hills and islands. Various and glowing culture of different states is a major pull over factor for tourists. Interestingly, medical packages are combined with leisure activities, fun and fitness to make it complete tourism material for the patients across the globe. According to the Government's "Make in India" report, the wellness industry in India is

account INR 490 billion and wellness programs alone comprise 40% of the market. The AYUSH sector (Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy) has an annual turnover of around INR 120 billion. India Healthcare- It is the 1st healthcare tourism portal launched by Indian Government in April 2015 with aim of giving qualitative and quantitative information about medical tourism.^[4]

Marketing Ayurveda as a Part of Health Tourism

Preference for natural and herbal health care is increasing among masses. India has lot of tourists from other countries, coming for the rejuvenation promised by Yoga & Ayurvedic massage. Kerala is the state that has emerged as the Ayurvedic and Yoga hub in the country, has witnessed average hang back period of visitors going from 14-18 days now, the highest in the country just because of *Yoga* and *Panchkarma*.^[5] Marketing Ayurveda as part of Health Tourism has brought a new definition to vacationing in India itself.

Potential fields of Ayurveda for Health/ Medical Tourism^[6,7]

1. **Swasthivritta-** This is the field which guide us to live a healthy and happy life by following certain guidelines related to personal habits. *Dincharya* deals with right mode of doing our daily chaos. *Ritucharya* deals with effect of seasonal variations on our body and to prevent seasonal diseases by following certain guidelines and stay healthy. The science also trains us to do socioeconomic adjustments which are the need of hour.
2. **Pathya- Apathya-** The science of dietary modification to prevent and cure certain diseases. In the modern world it is called Nutrigenomics. Nutrigenomics is the study of how food affects a person's genes and how a person's genes affect the way the body responds to food. *Pathya apathya* is indication and contraindications of certain food articles in relation to particular disease. *Virrudhahara* is consumption of incompatible food articles together which may cause various diseases in person.
3. **Garbha Samskara-** It incorporates pre-conceptional counselling, care during antenatal, natal and post-natal period by following Ayurvedic principles. The main aim behind the care of women to inculcate good habits to child in womb, uneventful normal delivery and postpartum period and getting a desired and healthy child as Ayurvedic science is rich in references related to that. The concept is base of modern-day terminology of Epigenetics.
4. **Rasayana-** It is the science of regeneration. Everyone wants to stay young and healthy. *Rasayana* therapy decreases oxidative stress in

body and causes immunomodulation. A lot of *Rasayana* drugs are there and different methodology of use of them is mentioned in Ayurvedic texts. *Achara rasayana* teaches us behavioral modification to create a healthy and happy society. That aspect can be used to enhance health tourism.

5. **Vajikarana**- Infertility rate is rising in modern day generation. Desire for progeny is natural. Ayurvedic literature is abundant in aphrodisiac and fertility enhancing regimes under the *Vajikarana*. Aside from it, many *Panchkarma* procedures are showing very good results in male and female infertility both. It is the strongest field which can generate a lot of revenue for government through medical tourism.
6. **Panchkarma**- That is the field which is best established for the sake of health tourism in India. Certain southern states established it very well. But still the full potential of this field is not exhausted by us. As *Panchkarma* is usually famous for massage therapy and *Shirodhara*. Other *Karmas* like *Vamana*, *Virechana*, *Basti* and *Raktamokshana* are very much beneficial in certain chronic disorders like neuro musculoskeletal disorders, skin disorders, infertility, PCOS and other gynecological disorders etc.
7. **Yoga & Meditation**- Improves physical and psychological wellbeing of a person. Enhances agility, resilience and immunity.
8. **Naturopathy**- Mud therapy, acupuncture, use of healing power of nature, *Marma* therapy, *Jalauka* (leech therapy) etc.
9. **Cosmetology**- Ayurvedic literature is rich in beauty products and a lot of preparations are already available in market based on textual reference. Textual references related to hair care are *Japakusum lepa*, *Bharangi lepa*, *Kumari Amlaki Ghana lepa*, *Gunja taila* etc. *Kumkumadi taila* is used for glowing skin. *Neem* and *Aloe vera* is highly used in beauty products.

It is needless to say that AYUSH therapy packages if designed and promoted with tourism can play a major role in establishing India a favourite destination for health tourism. The strength of Ayurveda to pull tourists lies in following factors-

1. Natural, age-old, time-tested therapy. People are frenzy about natural therapies these days as they are well aware of side effects and health hazards of chemical products.
2. Where other pathies fail like in certain chronic disorders A has answer to them. At least it can provide good palliative therapy to make the patient's life comfortable.

3. Ayurveda is more than a preventive medicine. People are keener to live healthy life. They are well receptive to the science which teaches healthy way of life.

4. Cost effective.

Contamination of Ayurvedic Content

Ayurvedic system is the traditional medical system having origin in India. It uses herbal and herbo-mineral compounds for therapeutic purposes. The major reasons for contamination of Ayurvedic products are:^[8]

1. **Availability of Herbs**- Now days many drugs used in Ayurvedic formulations are not available or scarcely available that leads to use of other varieties of same genus or representative drugs that may have similar effects. As *Daruharidra* used in many herbal formulations which should be *Berberis aristate* but it is found at very high altitude about 1800- 3000 meters so easily available *Berberis lyceum* in lower hills is used instead. *Ashtavarga* drugs like *Jivaka*, *Rishbhalka* etc are not available now days. Therefore, substituted by other available drugs like *Jivaka*, *Rishbhaka* is substituted by *Vidarikanda* (*Pueraria tuberosa*), *Meda*, *Mahameda* by *Shatavari* (*Asparagus racemosus*), *Kakoli*, *Kshirkakoli* by *Ashwgandha* (*Withania somnifera*) and *Riddhi*, *vridhhi* by *Varahikanda* (*Dioscorea bulbifera*). That practice is certainly going to affect the efficacy of formulation. Same with *Lakshmana*, due to uncertain identity different species such as *Aralia quinquefolia*, *Ipomea sepiaria* etc are considered.

2. **Huge Demand**- *Amla* is highly popular immuno-booster drug. *Amla* is majorly used as pickles, murabbas, *Amlaki swarasa* (juice) etc in India at commercial level. It is the essential component of many popular drugs like *Chywanprash*, *Trifla churna*. *Amla* is also used as content of many beauty products especially hair care products like *Amla taila* etc which contain *Amla* (*Emblca officinalis*) as main ingredient, there is huge production of all these products by various pharmaceutical companies in disparity to overall produce of *Amla* in country. In this scenario the pharmaceutical companies are able to use this drug in right proportion mentioned for particular preparation is questionable. Similar is with *Ashokarishta* whose main component is *Ashoka* (*Saraca asoca*). To meet the growing demand *Polyalthia longifolia* the false *Ashoka* tree or ornamental *Ashoka* is used. Similarly, at the place of *Vidarikanda* (*Pueraria tuberosa*) the stem of *Cycus* is used. Liquorice or *Mulethi* (*Glycyrrhiza glabra*) is adulterated with *Gunja* (*Abrus prectorius*) roots. First stage of adulteration

is at the level of collectors. Either they mistakenly use similar looking plants or knowingly do it for increasing volume. Second stage of adulteration is at manufacturer's level that is always willful for the profit.

3. Drug Identification Issues- Sometimes apparently few herbs are identical that require very much expertise to discern them. As it is very difficult to differentiate *Kushta (Saussurea lappa)* and *Pushkarmula (Inula racemosa)* similarly among *Kutki (Picrorhiza kurroa)* and *(Gentiana kurroo)*. *Trayamana Amlavetas (Garcinia pedunculata)* and *Chakra (Garcinia indica)*, *Nagkesar (Mesua ferrea)* and *Punnag* or *Sultan champa (Calophyllum inophyllum)*. *Mucuna pruriens* is adulterated with other similar Papilionaceae seeds like *Mucuna utilis* (sold as white variety) and *Mucuna deeringiana* (sold as bigger variety). Drug collection for Ayurvedic pharmacies is usually done by contract laborers, due to ignorance they sometimes pick similar looking plants or sometimes due to common vernacular name. *Guduchi (Tinospora cordifolia)* accidentally confused with *Tinospora crispa* during collection. Later one is hepatotoxic. *Phytolacca acinosa* (Indian Pokeweed) is medicinal plant and vegetable from the hills, ignorantly people collect highly toxic *Atropa acuminata* (Indian Belladonna, deadly nightshade) leaves in place of *Phytolacca acinosa* (Indian Pokeweed) overdue to their resemblance during the vegetative stage leading to fatalities. In Ayurveda, *Parpatta* refers to *Fumaria parviflora*. In Siddha, *Parpadagam* refers to *Mollugo pentaphylla*. Owing to similarity in the names in traditional systems of medicine, these two herbs are often interchanged, adulterated and substituted.

4. Lack of Proper Collection and Storage- In Ayurvedic texts details are mentioned about the season and mode of collection of herbs and the shelf life of various preparations. Those methods are not properly followed in compulsion of increasing producibility. Drying of herbs is also a major issue, if herbs are not dried properly then molds will grow in it and contaminated drug may cause harm instead of benefit. Sun drying is not recommended for medicinal plants especially containing volatile essential oils. However, most of the collectors dry them under the sun.

5. Method of Preparation- Proper drug manufacturing practices are not usually followed by pharmaceutical companies. It is especially important in herbo-mineral or mineral compounds. If proper techniques of *Shodhana*, *Marana* (purification) are not followed for minerals and poisonous herbal compounds as mentioned in texts. They will cause more harm than benefit. It is the

major reason behind heavy metal toxicity among users.

6. Period of use and Dosage of Herbo-mineral Compounds- Herbal compounds can be used for prolonged duration without harm but herbo-mineral and minerals should be used for shorter period and in specified low dose because *Rasa aushdhis* are mentioned as *Aashukari* (giving effect instantly) that is why they shouldn't be used for prolonged period and in excessive dose.

Strict compliance to drug standardization techniques is the need of hour to return the fame to age old Ayurvedic medicine. Development and promotion of bulk drug farms in different regions of country is imperative to meet the growing demand of herbs and prevent adulteration of herbal preparation. Although government of India is putting lots of efforts in this direction yet there is lot left to achieve the target. The future development of analysis of herbs is largely dependent upon reliable methodologies for correct identification, standardization and quality assurance of Ayurvedic drugs.

CONCLUSION

Health Tourism is a major tool to strengthen the economy of country. Incorporation and promotion of indigenous systems of medicine will further strengthen the concept of health tourism. Though AYUSH is playing a fair role in health tourism yet a lot of potential is still unutilized. As world is turning towards natural and healthy lifestyle, being herbal, natural and preventive medicine Ayurveda can offer a lot. Strict adherence to "Drug Standardization Protocols" is the need of hour by drug manufacturing units to eliminate the taboo of metallic toxicity and placebo for Ayurvedic preparations globally. All adulterations are not intentional malpractice, sometimes scarce availability, drug identification issues, cost are unavoidable reasons to do that. The most essential criteria for substitution are pharmacological activity. The basic idea should be to provide similar therapeutic effect as that of the original. It widens the scope for clinician to utilize herbs that are easily available, cost effective and appropriate for clinical condition.

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