


ROLE OF TRADITIONAL HERBAL PRODUCTS TO DEVELOP IMMUNITY

Dr.Rekha V. Gore

Department Of History

D.G.Ruparel College Senapati Bapat Marg Matunga Road, Mumbai – 40001

Abstract

In current situation COVID-19 lack of vaccine, identifying natural plant sources that can help in fighting this disease or boosting the immune system. In this research paper identify and scrutinize potential medicinal plants, development of herbal / Ayurvedic antiviral drugs, designing antiviral material development of immune describe in this paper

Keyword- *Traditional Medicinal plants, Herbal plants human cells*

Aims

To provide benefits assessment of selected herbals medicines traditionally indicated for “respiratory diseases” within the current frame of the covid-19 Pandemic as an adjuvant treatment.

Method

The herbal plant selection was primarily based on species listed by the WHO and EMA European medicine, but some other herbal remedies were considered due to their widespread use in respiratory condition. Preclinical and clinical data on their efficacy and safety were collected from authoritative sources; the target population was adult with early mild flu symptoms.

Ayurvedic Market in India 2019

In recent year, as a holistic healing system ayurvedic has witnessed evolution in the form of ayurvedic products and services. Rising awareness about the importance of the healthy lifestyle increasing preference in favour of chemical free natural products as well as favorable government initiatives have led to the expansion of the Ayurveda market in India.

Segmentation based on product usage:-

The Ayurveda market in India is segmented on the basis of Ayurveda products and Ayurveda services. Personal care products, food and beverages, household products and healthcare products fall under the Ayurveda products category. The Ayurveda services segment comprises healthcare services and spa and rejuvenation services. In 2018, the Ayurveda products segment accounted for approximately 74% of the market, while the Ayurveda service segment had the remaining 26%.

Growth drivers of the Market

- To maintain a healthy lifestyle, consumer are increasingly preferring food products like herbal tea, oats, corn flakes, biscuits cookies, spices, Jam and almond oil which are made of natural ingredients. With the increase in awareness about harmful effects of the chemicals on health, used in the production of popular conventional skin care, hair care, body care and other beauty care products, shift of preference among consumer has been observed in favour of herbal personal care products, which is driving the growth of the market.



- The global acceptance of traditional practices of herbal & Ayurveda treatment has broadened the prospects of Ayurveda tourism in India. As a result, Many Ayurveda rejuvenation and therapeutic centers have been established in states like Kerala, Uttarakhand, Goa and Odisha.

Deterrents to the growth of the market

- Owing to the adverse weather condition yield of high quality herbal and medicinal plants is low in India. Also excessive use of the insecticides and pesticides degrades the quality of herbs. With medicinal properties, herbal and medicinal plant being the primary ingredients of all Ayurveda products, Shortage of high quality plants lead to deteriorating quality of plants these products and services.
- The Ayurveda market in India consists of several players who do not adhere to the quality standards for the products and services offered. There are
 - FPS (Finished Product Specification)
 - GMP (Good Manufacturing Practice)
 - ISOC (International Organization for Standardization for quality Certification in India)

Competition Analysis of Herbal Companies

Consumer often purchase Ayurveda products based on the quality and reputation associated with a brand.

Therefore, in order to gain high volumes & revenue in the market, a company needs to develop a strong brand image which may prove to be difficulties for a new entrant. Major players operating in the Indian Ayurveda products market include Dabur India Ltd, Emami Ltd, Patanjali Ayurveda Ltd, The Himalaya Drug Ltd, Sandu Pharmaceuticals Ltd, Shahnaz Ayurveda Pvt Ltd, Baidyanath.

The top players operating in the Ayurveda Service market in India Include Somatheeram Ayurvedic Hospital, Yoga Centre Pvt Ltd, Ananda in the Himalayans, Kairoli Ayurvedic centre Pvt Ltd, mercure Goa Deevaya retreat & Ayurogashram Pvt Ltd.

Export value of Ayurvedic and herbal product from India from Financial year 2019-2020

Financial year	U.S Dollars
2019-20	446.13
2020-21	428.28

Health Pharma & Meditech Pharmaceutical products & market

The scope of the herbal medicine commonly includes fungal and bee products, as well as mineral, shells, and certain animal parts. Herbal medicine is also Phytomedicine or phytotherapy. The driving forces behind the growth of herbal industry.

The growing awareness for preventive healthcare methods is the major driving factor of this market. The global market based on the sources has been segmented into leaves, barks, fruits & vegetables and roots. The Pharmaceuticals segment accounted for the targets share of the herbal supplement market in 2015-2019

Herbal Ingredients in the mainstream channel

- Horehound (Marriubum Vulgure)
- Cranberry (Vaccinium Macrocarpon)
- Echinacea (Echinacea SPP)
- Green tea (Camellia Sinensis)



- Black Cohosh (Actaea racemose)
- Garcinia (Garcinia gummi-Gutta)
- Flax or Flaxeed oil (Linum Usitatissimum)

Medicinal Plants

Bael = Extract of the leaves of this very familiar tree helps cure diarrhea, dysentery, constipation.

- Peppermint or Pudina
- Neem
- Henna or Mehendi
- Cinnamon
- Lavender
- Marigold
- Tulsi Marrubium Vulgare
- Vaccinium macrocarpon
- Echinacea
- Cannellia sinensis
- Aloe vera
- Zingber officinale
- Cocus Nucifera
- Cinnamomum Spp
- Allium Sativum

The main problem in global trade of herbal products However loss of diversity, over exploitation and unscientific use of medicinal plants, industrialization and infrastructure are the major impediments to the growth of herbal medicine.

Top selling Botanica in Covid-19

- Cranberry
- Saw palmetto
- Soy
- Garlic
- Gingko
- Echinacea
- Milk thistle
- Black Cohosl

The number 1 food supplement in the world. USANA Philippines named number one vitamins and dietary supplement brand by world leading market research company.

The best medicinal plant in science:-

- Turmeric
- Evening Primrose oil
- Flax seed



- Tea Tree oil
- Echinacea
- Grapes seed extract
- Lavender
- Chamomile

Harmful Product for Ayurvedic medicine

Lead, mercury & arsenic have been found in some Ayurvedic products. Certain populations, including children are particularly at risk for the toxic effects of heavy metal. Ayurvedic medicine is a traditional system of healing art that originated in India. The export of medicinal herbs to China has increased from USD 5.4 million in 2016-17, 2018-19 making China one of the top five countries to which India majority export medicinal plants products.

From India 70% export today is psyllium Husk (Isabol Husk) Saffron is the world's most expensive medicinal herb and it can cost \$500 to \$5000 per pound saffron is harvested from the flower of the saffron Crocus.

The fastest growing herbs from deed

- Sage
- Fennel
- Dill
- Oregano
- Chervil
- Mint
- Coriander
- Chives

The outbreak of covid-19 has brought a positive impact on the global herbal medicine market due to the surging demand for herbal medicine to boost immunity. The herbal pharmaceuticals segments gained significant traction in the covid-19 era due to their chemical for nature. Herbal medicines are most common treatment for curing various diseases. The increasing awareness about the advantages of herbal medicines is expected to be another salient cause, which can develop the global herbal medicine market in the forthcoming tenure. Herbal medicines are chemical free. Therefore they are preferred more by the population. Thereby augmenting the herbal medicine market size in the prediction term. Besides, they are also low cost. Therefore, the industry is expected to gain significant momentum.

Opportunities:-

The growing research investment and funding in herbal medicine are expected to offer significant market expansion opportunities in the coming time. Besides, the outbreak of covid-19 has also offered lucrative opportunities to the medicine manufacturer that will develop the market.

The growing R & D for herbal medicines and the increasing investment in the market is anticipated to be a significant factor that is projected to drive the market during the analysis timeframe. The growing prevalence of chronic illness among the expanding populace is expected to be another salient cause that can develop the market in the region.

Competitive Landscape

The global market for herbal medicines is highly fragmented due to the presence of various players. The growing application of medicinal plant is expected to after multiple opportunities of market expansion, thereby growing the



number of new players entering the market. Besides, there are various regional players that make the market more competitive.

The manufacturers are focusing on developing herbal products and the growing technological development in the herbal medicines industry is likely to accelerate the market competitiveness. In addition, the increasing initiatives to expand their consumer base are likely to grow the industry search.

List of players

- Arkopharma
- Bayer AG
- BEOVITA
- Hishimo Pharmaceuticals
- Schaper & Brummer
- Zein Pharma Germany GMPH
- Venus Pharma GMPH
- Dasherb Corp
- Arizona Natural Products
- Black mores
- Himalaya Global Holding Ltd
- Dr. Willmar Schwabe India Pvt Ltd

Global Herbal medicine market

Herbal Pharmaceuticals

Herbal Pharmaceuticals functioning food

Herbal Pharmaceuticals beauty product

Herbal Pharmaceuticals Dietary supplement

Global Herbal Medicine

- Leaves
- Roots & Barks
- Whole plants
- Fruits
- Extracts
- Powder
- Capsules & Tablets
- Syrups

Indian medicinal plant & Formulations and their potential against covid-19. The cases of covid-19 are still increasing day by day worldwide, even after a year of its first occurrence in Wuhan city of China. The spreading of SARS-Cov-2 infection is very fast.

In India too, it is spreading very rapidly, although the case fatality rate is below 1.50% which is marketely less than in other countries, despite the dense population and the minimal health infrastructure in rural areas. They may be due to



the routine use of many immunomodulator medicinal plants and traditional Ayush formulation by the Indian people. The traditional AYUSH medicines currently under clinical trial, against COVID-19 are also discussed as well as furtherance of pre-clinical and clinical testing of the potential traditional medicines against Covid-19 and SARS-Cov-2.

Severe acute respiratory syndrome related coronavirus (SARC-Cov-2) has become a pandemic hazard. Although the pathogenesis of COVID-19 is still not a clear, patients with Covid-19 show non-specific symptoms ranging from no symptoms to reserve pneumonia and death. The most common symptoms include fever, non-productive cough, dyspnea, Myalgia, Fatigue, Diarrhea, Lung damage, normal or decreased leukocyte count and radiographic evidence of pneumonia which are similar to the symptoms of SARC-COV & MERS-COV infection (Who,2020, Rothan & Byrareddy 2020)

Scientists are working hard to develop effective treatment. As of October 18,2020 more than 3611 clinical trials on Covid-19 are either ongoing or enrolling patients. The drugs being tested range from repurposed flu treatment to failed ebola drugs to malaria treatment that were first developed decades ago (Lythogoe & Middleton 2020).

The Indian traditional system of medicine is one of the oldest systems of medical practice in the world and has played an essential role in providing health care service to human civilization right from its inception. India has the exclusive distinction of its own recognized traditional medicine. Ayurveda, Yoga, Unani, Siddha & Homopathy. (Adhikari & Paul 2018)

Many safe traditional formulation of AYUSH, which are well known immunity modulators, have been used for centuries in respiratory disorder and in allergic condition.

Similarly there are many medicinal plants indigenous to India and used in the Indian system of medicine which have been reported as potent antiviral which immunomodulatory and anti-allergic / anti asthmatic activities. Many of their medicinal plant are also an integral part of several traditional formation that have been in use for a long time.

Potential Traditional Indian AYUSH formation for the manufacture of COVID-19

Ayurvedic means ‘Science of Life’. It provides a complete system to have a long and the healthy life. It is derived from the concept of Dinacharya daily regimes and Ritucharya (seasonal regimes) to maintain a healthy life, uplifting & maintaining the immunity is duly emphasized across the Ayurveda’s classical scriptures.

The Unani System

The unani system of medicine known as Greco-Arab medicine is built on four condition of living (hot, sodden, frosty and dry) and four humours of Hippocratic hypothesis namely blood, yellow bile, dark bile & mucus. Epidemic referred as waba in the Unani system of medicine are though to occur if any.

Contagion or ajsam-i-khabita fluid a place in air & water.

Furthering the view Ibn-e-sina (980-1035 CE) stated that epidemics spread from one person to another and city to another.

(Sima 1878-Book)

stated that epidemics spread from one person to another and city to another. ‘Like a massage’ Clinical trials of Ayush medicines like – Ashwagandha, Yashtimadhu, Guduchi, Pippali.

AYUSH Kwath:-

It is available in powder & tablets form in the market. There herbs are reported to boost immunity. Carrasco et al:



Nipahde et al 2009, Alushibani khan 2017; Bhalla of 2017 and are active remedies to virus viral disease.

Covid-19 is there evidence for the use of herbal medicines. Routinely used common Indian medicinal plant for exploring against covid-19. Ashwagandha, Giloe, ginger, annamon, tulsi, black pepper, black cumin, amla, turmeric, garlic and Flax seeds have been traditionally used for herbal remedies for multiple disease since ancient times. These herbs have been utilized in food preparation and traditional medicines in several countries. Similarly, there are some traditional Indian formulation such as Chyawanprash, Triphala and Rooh Afza etc, that are very commonly used in Indian territory as a part of daily used nutritional supplements.

The traditional herbs have been proved potent scientifically further immunomodulatory, antioxidant and anti-infective properties, which might be one of the reasons behind the lower death rate of Indian behind the millions of population due to COVID-19 even with minimum health infrastructure.

Allium Sativum (Garlic)

Cinnamomum Verum

Curcuma longa (Turmeric)

Turmeric extract has been found to be anti-allergic in mice immunized with oxalbumin and alum. Attenuation of food allergy by maintaining balance of Th1/Th2 has been reduction in Th2 and increase in Th1 Cell-related Cytokines.

Linum Usitatissimum (Flax seeds)

The immunomodulatory activity of phenolic components of flax seeds mainly through reduction response

(Kasote. Et. Al 2012)

Nigella Sativa (Black cumin)

Export for India	Country	Quantity million
Black Paper	USA	3.96
	S. Weden	3.02
	U.K	1.46
	Poland	0.72
	turkey	0.72

The economic times news export from Cochin, Bangalore, Nhava Sheva.

Turmeric – During the pandemic situation the export of turmeric from India a spice with immunity boosting properties has recorded an impressive growth of 42 percent in terms of first half of 2020-21. India exported turmeric valued at approximately 194.35 billion U.S dollars making in the leading exporter of the turmeric worldwide. The major importing countries of Indian turmeric are the UAE, Iran, US, Sri lanka, Japan, UK, Malaysia and South Africa.

Ginger:- the traditional export markets for India are Pakistan and Bangladesh, Saudi Arabia, the United states, Yemen Republic, the Netherlands.

Indian Trade Council

In 2018-19 Indian special from Maharashtra & Karnataka exported around US \$31.5 million worth of ginger.

Flax seeds:- Export in 2019-20 from India, Japan, Italy, North America, France, Europe, U.K, Saudi Arabia, Iran.

Ashwagandha:- Ashwagandha export in 62 countries international market from India.

Giloe:- The giloe exporter from India total exporting percentage counts to about 22.3% from India. Maharashtra is amongst the top exporting states in India.



Black cumin: - In the year 2020-21 (April-Nov) India has exported Black cumin worth of 361.629 USD million.

Garlic: - Over the period under review, production reached the peak level in 2020 and is expected to retain growth in the year to come. In 2020, garlic export from India fell remarkably to X tonnes, which is down by ---X% compared with the previous year's figure. Overall export, however, posted a strong increase.

Conclusion:

Traditional Medicine particularly herbal medicine playing important role in maintain of health in rural and remote area inclusion of traditional herbal medicine in clinical practice will help to achieve a great health for all. Indian traditional medicine like Ayurveda and others have sound scientific background of effectiveness and also acknowledge by the recent period. Although efforts are needed to overcome barriers irrational use, quality control and standardization issue, High pharma covogilance stick implementation of rules monitoring and periodic revision of regulation are absolute necessary to promote Indian traditional medicine. Proper information about such drugs and there effectiveness among common people requires towards the promotion of such medicine.

References

- Ayush Ministry of health corona advisory- D.O.No.S.16030/18/2019-NAM Dated – 06 march 2020.
 Ayush Ministry of health corona advisory F.No.Z.25/09/2018-2020. DCC (ayush) dated: - 24th April, 2020.
 Mair et-al (2016) Ghoke 2018.
 Ayush research portal 2016 excess from <http://ayushportal.nic.in/default>.
 Indian council of Medical Research highlights of ICMR activities and achievements.
 Singh, H, Medical Chemistry research in India. Indian J History of Science 2014; 49:413-423.
 Ishwarlal S, Gupta S, Rasunjaal Vakil his contribution to cardiology, Tex Heart Institution 2006; 33:61-170.
 Sharma C, Rajendar K, Kumari T, Arya KR; Indian traditional therapy and Bioprospecting there role in Dru development research institute pharma science 2014; 5:730-741.
 Pathwardhan B, Mashelkar RA, Traditional Medicine to inspire approaches to drug discovery: Can Ayurveda show the way forward? Drug discover today 2009;14:804-811
 Payappalimana U, Role of traditional medicine in primary health care: An over view of perspective and challenges Yokohama Journal Social Science 2010; 14:57-77