

## **An Overview of Ayurveda Industries in Kerala – An Entrepreneurial Perspective**

Manilal .P<sup>1</sup>, Dr. Kemthose P Paul<sup>2</sup>

<sup>1</sup>Research Scholar,

Kerala University of Fisheries and Ocean Studies (KUFOS), Panangad, Kochi

<sup>2</sup>Research Guide & Professor,

Sree Narayana Gurukulam College of Engineering (SNGCE), Kadayurippu

### **ABSTRACT**

Ayurveda, which has 5000 years of existence, enjoys a growing recognition internationally as an alternate system of medicine. Now it is expanding its position to provide solutions for lifestyle and wellness related issues. In 2018, in India Ayurveda touched a market size of \$4.4 Billion or Rs 30,000 crore, with an annual compound growth rate (CAGR) of 16%.. This study explains about the different elements in the entrepreneurial ecosystem, and their impact on the system, SWOT analysis of the ayurveda industry and opportunities for entrepreneurship in the ayurvedic sector in Kerala. The need to provide greater impetus for research translation and innovation, in the ayurvedic product and services development especially related to the pharmacological segment is also described, so that an entrepreneur can provide a value proposition to the society. It also throw lights on peculiarity of Kerala ayurveda, ayurvedic tourism industry in Kerala , supply chain related opportunities and other promising areas and importance of disruptive innovation and technology adoption required in the sector. Different initiatives taken by the various government agencies for revitalizing the sector for global leadership by promoting start-ups, scale up and cluster development are also described.

**Keywords:** Entrepreneurship, Ayurveda, SWOT Analysis, Innovation, Disruption Technology, Kerala Ayurveda

### **1. INTRODUCTION**

Ayurveda, the oldest form of medicine as an alternative system has gained wide recognition globally. It is popular not only in developed countries but also in developing countries and shows promising growth rate. However, innovations are required to tap the huge potential of Ayurveda for economic development. Though Ayurveda sector has lot of strength, it has to address its weakness so that it gives huge entrepreneurial opportunities for development. This study overviews Ayurveda industry in Kerala using SWOT analysis and suggest areas for entrepreneurial opportunities

### **2. STATEMENT OF THE PROBLEM**

Presently both in the domestic as well as in the international market, there is a good demand for product and services of ayurveda especially Kerala ayurveda. However to tap the potential of the market, innovations are required and changes are required in the following area from the existing format. It includes product development, production process, quality control, raw material development etc backed by strong research and development support. (Narayanan, 2009)

Ayurveda and wellness contribute 25-30% income generation of Kerala tourism. Sri Lanka offers wellness tourism at a much lesser cost and there by Kerala is fast loosing out revenue to Sri Lanka and find it difficult to attract international tourists (Najeeb, 2018)

**3. RESEARCH OBJECTIVE**

- To analyse the national and international market size of ayurveda product and services and its future potential.
- To analyse the ayurveda industry using SWOT analysis and find out strength, weakness, opportunities and threats of the sector.
- To identify the entrepreneurial opportunities in the sector and supporting measures extended by different agencies to promote entrepreneurs in the sector

**MARKET SIZE AND POTENTIAL FOR AYURVEDA**

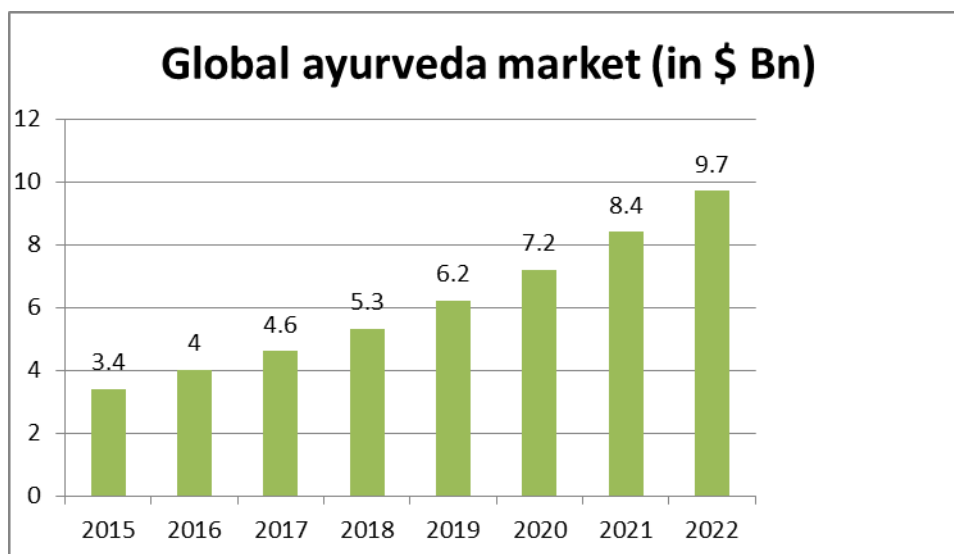
Ayurveda market size globally amounted to US\$ 3.4 billion in 2015 and is projected to reach US \$9.7 billion by the year 2022 at a compounded annual growth rate of 16.2 %. (Mehta, Raghavan, Gadi, & Kotak, 2018)

**GLOBAL MARKET SIZE AND POTENTIAL FOR AYURVEDA**

<b>YEAR</b>	<b>GLOBAL AYURVEDA MARKET (IN \$ BN)</b>
2015	3.4
2016	4
2017	4.6
2018	5.3
2019	6.2
2020	7.2
2021	8.4
2022	9.7

**TABLE NO 1**

**GLOBAL MARKET SIZE AND POTENTIAL FOR AYURVEDA**



**FIG 1**

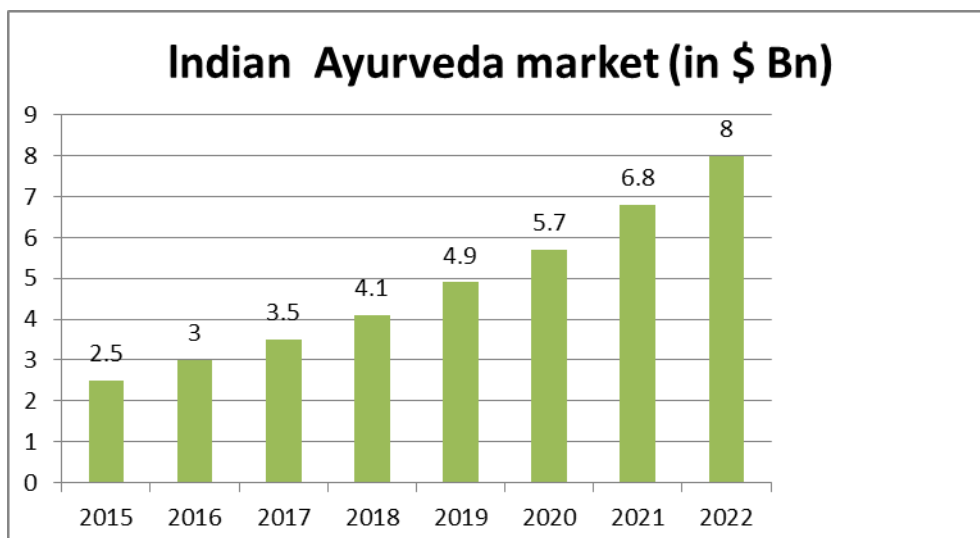
In India, the ayurveda industry touched a market size of US \$4.1 Bn and is expected to reach US \$ 8 Bn by 2022 (Mehta, Raghavan, Gadi, & Kotak, 2018).

**INDIAN MARKET SIZE AND POTENTIAL FOR AYURVEDA**

YEAR	INDIAN AYURVEDA MARKET (IN \$ BN)
2015	2.5
2016	3
2017	3.5
2018	4.1
2019	4.9
2020	5.7
2021	6.8
2022	8

**TABLE NO 2**

**INDIAN MARKET SIZE AND POTENTIAL FOR AYURVEDA**



**FIG 2**

Ayurveda products like drugs, herbal products, personal care and beauty products accounted to 75 % of the market share and the remaining 25 % are attributed to services like medical, well being or medical tourism (Das & Vasudevan, 2017). It is expected that the growth of ayurvedic product export is 20% until 2022 and in 2018 export worth is more than US \$780 million a year. Market penetration of ayurveda product has been increased from 69% in 2015 to 77% in 2017 (Mehta, Raghavan, Gadi, & Kotak, 2018). According to Sample survey of India only 10% of the population resort to alternate system of health care. So 90% are left out of reach of Ayurveda (Malik, 2014). So it has huge potential if it can be proven the safety and efficacy of ayurvedic medicines coupled with its lower side effects compared to modern medicine.

According to Confederation of Indian Industries (CII) , The size of ayurveda market in Kerala is estimated to Rs 2000 crore and efforts are being made so that by 2025 it touches Rs.10,000 crore (Saji Kumar, 2018)

## **SWOT ANALYSIS OF AYURVEDA INDUSTRY**

SWOT analysis of Ayurveda industry is as follow (Das & Vasudevan, 2017)

### **STRENGTH**

- Non Communicable Disease management using root cause diagnosis in Ayurveda
- Global recognition as a complementary medicine
- New product development time is less (3-4 years) as compared to Modern medicine drugs (10-15 years)
- Good manufacturing facilities and base

### **WEAKNESS**

- Inadequate worldwide accepted standards
- Not sufficiently connected and integrated with mainstream pharmaceutical market
- Batchwise variation in product quality

### **OPPORTUNITIES**

- Huge potential for Ayurveda related with tourism
- Good scope for innovation leveraging technology in therapy side
- Strong boost and promotion of Ayurveda by government
- Positive trend of the global consumers towards Ayurveda offering herbal organic natural and wholesome health care solutions

### **THREATS**

- Other alternate medicine system existing in China, South America and Latin America and their increased brand recognition
- Claim on Ayurveda heritage by Sri Lanka who offer relatively cost effective services to global customers thereby pose tough competition to Indian Ayurveda industry

## **ENTREPRENAURIAL ECO SYSTEM**

The various elements in an entrepreneurial eco system in ayurveda sector includes the following elements. Regulatory system like Drug controller, Ayush department and other government departments, market, suppliers including the raw material suppliers, equipment suppliers, other vendors, Human resource ,Capital and technology. Success of an entrepreneur depends on the unique value proposition they offer to the society. (Vasudevan, 2018) .For this an entrepreneur should innovate new product, service or solution using state of the art including automation of the process, Information and digital technology, good management practice etc. Disruptive innovation and disruptive technology are extremely important in the current entrepreneurial landscape.It includes use of artificial intelligence, robotics, and genomics (Saji Kumar, 2018)

In general an entrepreneur can provide product or service or solution in four different ways

- Existing product or service to existing market where there arise a red ocean strategy
- Existing product or service or solution to a new market
- New product or service or solution to an existing market
- New product or service or solution to a new market

New product or service or solution to a new market is an ideal one where the entrepreneur does not face any stiff competition and he can apply blue ocean strategy. (Vasudevan, 2018)

Major areas for entrepreneurship are follows

## **AYURVEDA DRUG, COSMETIC AND OTHER PRODUCTS MANUFACTURING**

### **A). OWN MANUFACTURING UNITS**

While developing a new ayurvedic product especially for therapeutic purpose, research, translation and innovation should be adopted. Major factors to be observed are safety and efficacy of Ayurveda drugs. Drug controllers license are required for manufacturing ayurvedic drugs. Good manufacturing practice (GMP) should be followed.

In Kerala, majority of the medicine manufacturers, manufactures classical ayurvedic product like Kashayam, Arishtam, leham, thailam etc. Doctor has a very important role in selecting the Ayurveda medicine and hence doctor is in the supply chain. Unlike proprietary medicine classical drugs are open source and hence profit margin is less compared to proprietary medicine. It is difficult to advertise classical ayurvedic drugs with celebrity endorsement as the same medicine is used for many application. So Kerala ayurveda is modernised but not adequately commercialised (Harilal, 2009). Outside Kerala there is a belief that classical Ayurveda is shrinking. But there is a good demand of pure authentic Ayurveda medicines and treatment from the global consumers (Vasudevan, 2018).

The products other than drugs includes nutraceuticals like dietary supplements and cosmetics

### **B). OUTSOURCING OF MANUFACTURING**

Capacity utilisation of ayurveda manufacturing industry in Kerala is low. Some units having GMP certification and other quality standards like ISO9001- offer manufacturing of ayurvedic medicines for the interested parties or third party marketing. This facility can be used by new entrepreneurs in a conversion charge basis so that no capital is employed for setting up the manufacturing facility.

The products like nutraceuticals like health supplements and cosmetics can also be manufactured throughout sourcing.

## **AYURVEDIC TOURISM AND WELLNESS**

Kerala God's own country is one of the most popular destination of tourism.. In Kerala there is a practice of authentic Ayurveda which attracts tourists all over the world to enjoy the benefit of Ayurveda in the rejuvenation therapy like Rasayana chikitsa, Body immunization and longevity treatment (Kayakalpa chikitsa), body sudation (sweda karma). body slimming, beauty care, mental

and physical wellbeing (meditation and yoga) and overall fitness (panchakarma treatment) (Benke, 2016).

### **AYURVEDIC CLINICS, TREATMENTS AND HOSPITALS**

Ayurveda clinics having outpatient centres can prescribe proper life style and ayurvedic treatments for non-communicable ailments like life style diseases, geriatrics, muscular and skelton diseases, degenerative diseases, pre and post natal care etc., and are providing solutions considering the individual characteristics of the patient unlike one size fit for all in the modern medicine perspective.

In patients can be offered treatments like abhyanga snana (medicated oil massage), Akshitarpana for eyes, snehapana in which medicated ghee is orally administered, kativasti for the for ailments in the waist area, sarvangadhara in which medicated oil is poured all over the body, udvarthanam, sirodhara with oil, takradhara with buttermilk, lepana, sirovasti, pizhichil, marma chikitsa, nasyam, karnapooranam, tharpanam. and panchakarma treatments. (Goyal, 2016)

Disruptive technology to be utilised as a tool to improve ayurveda as an effective preferred method in modern health care. In this age of artificial intelligence, robotics, and genomics all technical advancement should be effectively utilised for continuous refinement (Saji Kumar, 2018).

Integrating treatment of ayurveda along with modern medicine is a good option where Ayurveda has demonstrated its proven strength.

### **SPORTS MEDICINE**

Sports have a very important role in our life as sound mind only in a sound body. Fitness and injury are the two health related issues in sports. Ayurveda can play a significant role in sports medicine in area as given below (Goyal, 2016)

- Ayurveda treatments are available for trauma of bones, muscles and for systemic ailments
- Ayurveda offers solution to strengthen muscular system
- Ayurveda can be used as rejuvenators
- Herbal stress busters
- Memory enhancing solutions

### **RAW MATERIAL CULTIVATION**

One of the biggest problem that Ayurveda facing today is the availability of good quality of raw material (Ramanathan, 2019) Raw material cultivation in an organic way in an industrial basis has huge entrepreneurial opportunity. Entrepreneurs having access to land and agricultural facility can cultivate medicinal plants, which have good demand in the market. Government land or Forest area can be taken on lease and cultivate medicinal plants especially those having high gestation period.

### **RAW MATERIAL VALUE ADDITION**

There are huge requirement from manufacturers for the semi-processed raw materials which can be directly used for production process (Warrier, 2018). For example, coconut is an important raw material for ayurvedic products which cannot be directly used. Coconut milk has to be extracted

from coconut which is a time consuming and labour intensive activity for manufacturers. Majority of the raw materials for Ayurveda are collected from the wild. It is to be graded, sorted, dried and should be processed so that it can be directly used in the production process. This value addition process is a big economic activity and there are lot of entrepreneurial opportunities for this value addition process.

Senna is one of the medicinal plant which is largely exported to other countries after Isfagul. Senna is available in Tutricorn and Udaypur in India. It is extensively used in California for making herbal tea. After sorting grading and adulteration check, it is exported but not going to California, but it is sent to Germany and a company in Germany owned by Martin Baur group process this Senna and provide a value added product as per the quality stipulated which can be directly used for the production process. In india the price of senna is \$1/kg but after value addition its price is \$3.25/kg. As India cannot offer value added product as per the manufacturers in California specification we are loosing a revenue of \$2.25 /Kg. The above is an example of entrepreneurial opportunity in raw material value addition in ayurveda. (Puranik, 2018)

## **RESEARCH & DEVELOPMENT**

As far as drugs of any system of medicine are concerned, safety and efficacy of the drugs are to be tested and validated using clinical trials to convince international community. In the case of many ayurvedic drugs safety and efficacy of drugs are yet to be tested using the parameters using in modern medicine (Rao, 2017). Many of the ayurvedic drugs are not approved in developed countries because of lack of documentary evidence of clinical trials, batch to batch variation of product and other quality assurance systems. Similarly for approval of ayurvedic medicines by regulatory authority like US Food and Drug administration (FDA), drug master files are required. So there is a very good entrepreneurial opportunities for research and development in Ayurveda.

## **MANUFACTURING OF BYPRODUCTS USING HERBAL RAW MATERIAL WASTE**

Large ayurvedic product manufacturing firms will have more than 50 tonnes of raw material waste thrown out after the process. Several edible materials are used as raw materials. This waste can be used for producing by products like cattle feed, poultry feed and in some cases biscuits (Warrier, 2018).

## **SUPPLY CHAIN PARTNERS FOR THE AYURVEDIC MANUFACTURER**

Supply chain includes all parties in fulfilling a customer request (Chopra, Meindl, & D.V, 2014).. One of the challenges for new start up is the absence of a well-established supply chain to scale up market penetration. Supply chain in an ayurvedic product manufacturing includes raw material suppliers, members in the distribution channel, which includes whole saler, distributor, C & F agents, retailers, 3 PL/4PL service providers opportunities in these area are given below. Even though a firm has excellent product at a great price, it will be of no use if it is not available at the right time (Biju, Faisal, & Venugopalan, 2013). There should be good coordination between supply chain partners for better supply chain efficiency.

### **A). RAW MATERIAL TRADER**

There are different types of raw materials like herbs of fresh form (pachamarunnu), which are available in wild in Kerala and neighbouring states, herbs or plant origin in dried form (pettimarannu), commodities, metals, minerals and raw materials from animals like milk, ghee, cow urine etc. Entrepreneur opportunity exists as a middle man between collector of herbs and manufacturer.

### **B). RETAILERS, WHOLE SALERS, DISTRIBUTORS, C& F AGENTS**

These of channel partners of distribution network of finished products between manufacturer and final consumer.

### **C). LOGISTICS SERVICES 3PL /4 PL**

There are many logistics activity involved in ayurveda including transportation of raw materials and distribution of finished goods and other movement of value added raw materials like medicinal extracts and processed raw materials which can be directly used for production. Many raw materials are available only in northern parts of the country and market for ayurvedic medicines and other products are spread all over the country. There are huge logistics services required in this sector, which forms an entrepreneurial opportunity (Warrier, 2018)

3 PL: This is relatively a new service in Kerala ,where in the entire logistics function including transportation, warehousing and product distribution functions of a manufacturer are outsourced to a third party logistics provider. Fourth party logistics provider, a comprehensive business solution to the existing business, provides services related to design of transportation and distribution system. In the future there is a bright scope for entrepreneurship not only in ayurveda but in other areas like FMCG, pharmaceuticals etc.

### **AYURVEDIC DRUG MANUFACTURING EQUIPMENTS**

There are very less equipments or machineries for manufacturing ayurvedic drugs exclusively (Wagh & Huda, 2019). Presently the trend is to use equipments or machineries to manufacture pharmaceuticals related to modern medicine and modify to suit to Ayurveda .If tailor made equipments are readily available it will have good demand in the market.

### **AYURVEDA RESTAURANTS**

According to Ayurveda, diet is the best medicine. Due to junk and adulterated food and lack of physical activities and exercise this generation is more prone to various life style related diseases. So Ayurveda restaurant offering nutritious and wholesome group of delicious recipe served according to ones age and other physical and medical condition is a good opportunity for entrepreneurs (Goyal, 2016)

### **DIETICIAN / COOKING CONSULTANTS**

The present generation give lot of emphasis for diet. As per Ayurveda, the type and quantity of diet, an individual consume should according to one's age, season, nature (prakruthy) and likings. For a diseased person type of food consumed should be according to their nature of disease and

medication. There are different type of diet incompatibilities (virudhaharam) in ayurveda. The type of food to be consumed and how to cook the prescribed food are the area related to dietician and cooking consultants job description. There are entrepreneurial opportunities in this area (Goyal, 2016)

### **AYURVEDA JOURNALISM, TRANSLATION, PUBLICATION**

The publication of scientific studies related to Ayurveda serve as a medium communication to researchers, students, practicing physicians, pharmaceutical industry and other stakeholders regarding the recent developments in the field (Goyal, 2016).It includes publication of

- Books
- Journals
- Magazines
- Newsletter & News bulletin

### **TURNAROUND OF INEFFICIENT AYURVEDIC PRODUCT MANUFACTURING UNITS**

In 2013 there were 1100 registered ayurvedic medicine manufacturing units in Kerala but by 2018, only 680 units have the registration and only 530 units are functional (Ramanathan, 420 Ayurvedic medicine manufacturing companies closed in the last five years, 2018). Main reason cited are, rise in manufacturing cost and consequently incurring losses in the operation. Entrepreneurs who can invest for the state of the art can update the production process with new technology and turnaround such firms into profitable units.

### **MARKETING OF AYURVEDA PRODUCTS**

In this era of liberalisation, privatisation and globalisation, there is a fierce competition in the market and there is a trend that firm undertakes activities where they have core competency and other functions are outsourced. Some manufacturers of ayurvedic medicines and products having core competency in manufacturing outsource entire marketing functions to others who have expertise in that area. This is an opportunity for entrepreneurs.

### **PROMOTIONAL SCHEMES FOR ENTREPRENEURSHIP IN AYURVEDA**

Start-up India, Make in India, Invest in India, Digital India, Pradhanmantri Mudra Yojana, MSME schemes, cluster development are some of the initiatives introduced by different government agency to promote entrepreneurship applicable to ayurveda. Ayush department of central government has been taking several measures to promote Ayurveda in to the mainstream health care system in India. As majority of the Ayurveda enterprises comes under MSME, there are attractive schemes not only to promote new entrepreneurs for new ventures but existing entrepreneurs for modernising their unit by adopting new technology for improving productivity, quality and reduce manpower.

## **4. CONCLUSION**

Ayurveda industry in Kerala has got lot of potential for economic growth provided some of the inherent issues are well addressed. To capture the worldwide market of ayurveda, there should have an apt business strategy backed by very strong research and development support. This require huge investment. Majority of the present players in the market come under MSME, who may not have adequate resources to pump huge investment for research and development. So this sector look for direct investment from inside or outside the country. There are lot of scope of entrepreneurship in ayurveda and this study put forward some potential areas where new ventures can be easily conceptualised. There are different agencies under state and central government providing financial assistance to foster entrepreneurship in Ayurveda.

## 5. REFERENCE

- [1] Benke, V. R. (2016). Impact of Ayurveda Tourism. *New Man International Journal of Multidisciplinary Studies*(ISSN:2348-1390), 14-17.
- [2] Biju, M., Faisal, U., & Venugopalan, P. (2013). Opinions among Supply chain partners in Kerala-A Study on Ayurvedic Products. *Spectrum*, 11-12.
- [3] Chopra, S., Meindl, P., & D.V, K. (2014). Supply Chain Management. In S. Chopra, P. Meindl, & K. D.V, Supply Chain Management Strategy, Planning and Operation (p. 1). Noida: Dorling Kindersley (india) Pvt Ltd.
- [4] Das, R., & Vasudevan, R. (2017). Vision 2022 Roadmap for Indian Ayurveda Industry. New Delhi: Frost & Sullivan and CII.
- [5] Goyal, A. (2016). Entrepreneurial Scope in Ayurveda. *World Journal of Pharmaceutical Research* (ISSN 2277-7105), 436-440.
- [6] Harilal, M. (2009, April 18). Commercialising Traditional Medicine: Ayurvedic Manufacturing in Kerala. *Economic & Political Weekly*, pp. 44-51.
- [7] Malik, S. (2014). Health in India. New Delhi: National Sample Survey.
- [8] Mehta, R., Raghavan, V., Gadi, S., & Kotak, B. (2018). Ayurveda 2.0. gurgaon: Price Water Cooper.
- [9] Najeeb, E. M. (2018, October 18). *Times Of India*, p. 2.
- [10] Narayanan, S. (2009). Case Study of the Micro, Small and Medium Industries in the Ayurvedic Sector of Kerala. *Small and Medium Enterprises in Transitional Economies*(ISBN 978-81-8450-166-7), 522-523.
- [11] Puranik, R. (2018, November 04). National Seminar on Entrepreneurship and Business Development in Ayurveda. New Delhi, New Delhi, India.
- [12] Ramanathan, D. (2018, July 20). 420 Ayurvedic medicine manufacturing companies closed in the last five years. *Mathrubhoomi Daily*, p. 5.
- [13] Ramanathan, D. (2019, July). Representation to the Chief Minister of Kerala. *Oushadham Monthly* Vol.No.20, Issue No.07 (Registered No KL/TCR/327/2018-2020), p. 39.
- [14] Rao, G. H. (2017). Opportunities & Challenges in Ayurveda: Global Perspective. *Alternative & Integrative Medicine*(ISSN:2327-5162), 4-5.
- [15] Saji Kumar, S. (2018, October 05). CII's Ayurstart 2018. *Business Line*, p. 2.
- [16] Vasudevan, R. (2018, November 4). National seminar on Entrepreneurship and Business Development in Ayurveda. New Delhi, New Delhi, India.
- [17] Wagh, P., & Huda, J. (2019). Problems and Prospects for entrepreneurship Development in Manufacturing of Ayurvedic Medicine. *APIMR International Research Journal of Commerce and Management*(ISSN:2582-0966), 1-13.
- [18] Warriar, P. M. (2018, October 04). Global Ayurveda Summit. Kochi, Ernakulam, Indian.