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Challenges and Opportunities of Indian Traditional Medicine in Global Market

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Abstract

Traditional Medicine (TM) has been practiced in several countries for many health ailments and disease prevention. For many millions of people, TM regarded as a main source of health care. In relation with culture and history, each race has their own form of medicine. India has different system of medicines viz., Ayurveda, Siddha, Unani and Sowa Rigpa which comes under umbrella “AYUSH” and accepted by WHO. Indian TM particularly Ayurveda

Industry has billion dollars of total value market. Among thousands of Pharmaceutical companies in India, only few manufactures doing more than a million dollars' business to meet the growing demand for Ayurvedic medicine. Siddha Medicine considered as a heritage of Tamil Culture and having potent formulations does not yet enter into the global market even outside the state of Tamil Nadu, India. These TM comprise herbs, minerals and animal products for the production having high impact in economic value due to the usage of environmental assets. Developed countries are moved into the usage of herbal medicine and relaxing their guidelines in the herbal market. European countries share major market 41% of herbal medicine with 70% practitioners prescribes those medicines. WHO forecast, the global market value of herbal medicines (In directly TM) will be \$5 Trillion by 2050 having annual growth of 8%. India has rich source of herbal production and using nearly 2000 species in TM and contributes only \$1 billion among \$62 billion global market. This article discussed about the challenges involved in the production and marketing Indian TM and the scope of opportunities and demand in global market in reference to the WHO Traditional Medicine Strategy. Key challenges such as standardization of raw materials starting from Good Agriculture Practice and Procurement, Investments, Clinical documentation including Pharmacovigilance, Research and Development process, and Regulations and Policies were reviewed.

Keywords: Traditional, Medicine, Scenario, Standardization, Economic value.

Desafíos y oportunidades de la medicina tradicional india en el mercado global

Resumen

La medicina tradicional (TM) se ha practicado en varios países para muchos problemas de salud y prevención de enfermedades. Para muchos millones de personas, TM es considerada como una fuente principal de atención médica. En relación con la cultura y la historia,

cada raza tiene su propia forma de medicina. India tiene un sistema diferente de medicamentos, a saber, Ayurveda, Siddha, Unani y Sowa Rigpa, que está bajo el paraguas "AYUSH" y aceptado por la OMS. Indian TM, particularmente la industria de Ayurveda, tiene mil millones de dólares de valor total en el mercado. Entre miles de compañías farmacéuticas en India, solo unas pocas manufacturas realizan más de un millón de dólares para satisfacer la creciente demanda de medicina ayurvédica. Siddha Medicine, considerada una herencia de la cultura tamil y con formulaciones potentes, aún no entra en el mercado global, incluso fuera del estado de Tamil Nadu, India. Estos TM comprenden hierbas, minerales y productos animales para la producción que tienen un alto impacto en el valor económico debido al uso de activos ambientales. Los países desarrollados se trasladan al uso de la medicina a base de hierbas y relajan sus directrices en el mercado de las hierbas. Los países europeos comparten el mercado principal. El 41% de las hierbas medicinales y el 70% de los profesionales prescribe esas medicinas. Según la OMS, el valor de mercado mundial de los medicamentos a base de hierbas (In TM directamente) será de \$ 5 billones para 2050, con un crecimiento anual del 8%. India tiene una rica fuente de producción de hierbas y utiliza casi 2000 especies en TM y contribuye solo \$ 1 mil millones entre el mercado global de \$ 62 mil millones. Este artículo discutió sobre los desafíos involucrados en la producción y comercialización de Indian TM y el alcance de las oportunidades y la demanda en el mercado global en referencia a la Estrategia de Medicina Tradicional de la OMS. Se revisaron los desafíos clave, como la estandarización de las materias primas a partir de las Buenas prácticas y adquisiciones agrícolas, las inversiones, la documentación clínica, incluida la farmacovigilancia, el proceso de investigación y desarrollo, y los reglamentos y políticas.

Palabras clave: Tradicional, Medicina, Escenario, Normalización, Valor económico.

1. INTRODUCTION

The word Traditional Medicine itself denotes that this system of medicine has a long history of usage in maintenance of health and in prevention and treatment of diseases, particularly for chronic non communicable disease. World Health Organization (WHO) defined Traditional medicine (TM) is the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness (Whoint, 2019). Further WHO stated that system medicines which have been in existence more than hundreds of years categorized as traditional medicine.

The rationale usage of TM by the people shall be categorized in in three terms 1. One of the primary sources of health care in Africa, 2. Cultural and historical influences in India, China, Singapore, Srilanka, Myanmar, Thailand, Korea and Butan, 3. Complementary therapy in North America and European Countries. Many countries have their own traditional or indigenous form of health care which has root in their culture and history. Among worldwide, India is the only country having different types recognized system of traditional medicines on the basis of cultural and historical influences such as Ayurveda, Siddha, Unani and Sowa Rigpa. To promote safe and qualified practice of TM, Govt. of India formed a separate Ministry for Indian System of Medicine (ISM) under the name of Ministry of AYUSH. The objectives of Ministry of AYUSH are to upgrade the education

standard of ISM, to promote better research programme, to promote cultivation and vegetation of medicinal plants and to evaluate pharmacopoeial standards for ISM drugs.

Most of the ingredients used in the preparation of formulation in Indian System of Medicine (ISM) are derived from herbal products. The traditional preparation found in ISM comprises medicinal plants, minerals and organic matters etc. (Thillaivanan & Samraj, 2014). Rather Than TM, almost 1/4th of Allopathytherapeutical formulations has been derived from natural products (Thillaivanan&Samraj, 2014). Almost 21.5% of biodiversityarearefound in India and it comprises 8% of world biodiversity. In Indian Traditional and folk medicines around 25000 herbal based formulations are in practiced and more than 80,000 manufacture units are involved in the production of traditional based formulations (Kochhar, 1981). Globally India shares only 2% of market in herbal industry whereas China shares 30% (Aneesh et al., 2009). WHO estimated that by the year 2050 the market value of herbal medicine would be US \$5 Trillion (Whooint, 2019).

More opportunity is wait for the ISM Pharmaceuticals if certain innovation patterns and trademarks created in this field. While India exports quality products from ISM. It can achieve global leadership. It is unfortunate that more poor quality herbal products are in marketing over the counter. Even though WHO has created guidelines for the quality control of herbal drugs, the number of adverse events are reported from the people also been increasing on consuming herbal drugs (Aneesh et al., 2009). Most of the farmers and other persons related in the production of herbal medicine are not much aware of

WHO guidelines which result in the production of contaminated herbal products. This article reviewed the previous and current economic status and growth of ISM industry and also dealt with opportunities found in ISM drug industry on facing challenges and constraints.

2. METHODOLOGY

Siddha system of medicine is accepted as a splendid accomplishment and image of Tamil culture which began in Southern pieces of India. Siddha drug rooted from Dravidian culture and was developed in the period of Indus valley human advancement. Chinese speculative chemistry, Taoism, and Taoist Patrology are considered as a primary wellspring of motivation for Siddha speculative chemistry. It is trusted that in old time; the framework was created by eighteen Siddhar (a class of Tamil sages). In spite of the fact that Siddha arrangement of drug looks like with Ayurveda in numerous perspectives, it has claim reasoning and idea, all-encompassing methodology, and way of life situated measures (Subbarayappa, 2001 & Karunamoorthi, 2012).

Ayurveda is all around perceived in Asian nations like Nepal, Sri Lanka, Bangladesh and other Asian nations. About 75% of 100 million subcontinental individuals are getting a charge out of the advantages of Ayurveda. In Japan, Osaka Medical School has framed the Society of Ayurveda in 1969, and since most recent 40 years investigation, research and spread of Ayurveda is being done

enthusiastically. Ayurveda is additionally prevalent in Thailand, Myanmar. Training and routine with regards to Ayurveda is thriving in numerous conditions of USA. ISM for the most part Ayurveda is expanding in Argentina, Brazil, Venezuela, Chile, Nicaragua, Costa Rica, Guatemala, Germany, Austria, Switzerland, France, Czech Republic, Greece, Israel. Nations like South Africa, UAE, Russia, Sweden, Indonesia, Netherlands, Italy, Spain, Australia, New Zealand, Hungary have recognized Ayurveda. A few different nations are nearly doing the same. (Patel, 2003)

As of late there is a colossal upsurge in the utilization of customary and reciprocal medication around the globe. In Africa about 80% of populace uses such prescription for their essential social insurance. In China, it was evaluated that conventional home grown prescription records for 30– half of the all out restorative utilization. Larger part of the general population (around 60%) utilizes conventional home grown medications as a first line prescription for treatment high fever coming about because of intestinal sickness in nations like Ghana, Mali, Nigeria and Zambia. In Australia about 48%, in Canada 70%, in Germany 80%, in USA 42%, in Belgium 39% and in France 76% of populace utilizes conventional/correlative prescription at any rate once. Around 75% of the HIV positive/AIDS patients living in San Francisco, London and South Africa utilize conventional and reciprocal drug. In Malaysia, individuals spent more on customary prescription than allopathic medications. Significance of home grown meds as far as social insurance supplier and economy are

developing steadily (Sen & Chakraborty, 2016). Therefore, India has an incredible chance to advance ISM universally.

Certain key factors such as adulteration, misidentification, wrong collection, geographical variation, improper adaptation of process while doing preparation including purification process are known to be the main issues in affecting the safety and effectiveness of a traditional medicine (Sen&Chakraborty, 2016). Indiscriminate gathering, poor agriculture and propagation technique, poor pre and post harvest practices, lack of process techniques ends up in the substandard quality of medicine. Standardization, poor internal control procedure and lack of fine producing Practices (GMP) area unit the most hurdle to take care of the standard of medicine. Lack of awareness relating to the rule among growers and makers, lack of implementation and regulation of the rule are frequent in little and medium scale industries. Lack of regulation and dominant authority in herbal sector, lack of correct watching and dominant area unit are absolute want for the standard of medicine. Lack of process technique, trained personal, refined instrument, utilization of contemporary techniques, facility to fabricate instrument domestically area unit are the most important issues.

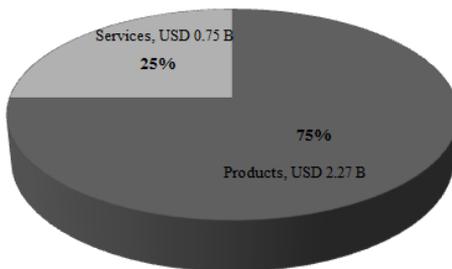
Correct Pharmacovigilance in ISM sector is that the want to seek out the pharmacology information and adverse drug reaction of ISM medicine. Adverse reactions, contraindications, interactions with alternative drug, food and existing orthodox prescribed drugs have to be compelled to be monitor properly. Since the protection continues to be a foremost issue with the employment of herbal remedies so,

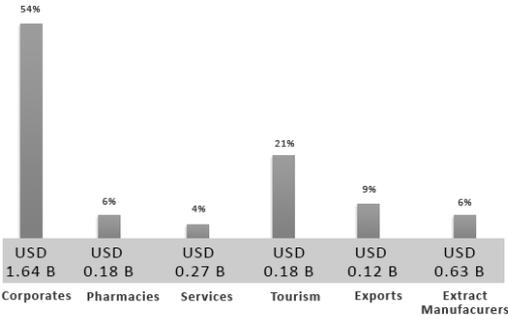
clinical trials area unit necessary to grasp the protection and effectualness of those medicine before introduced them in world market. Stealing is that the major problem in promotion of traditional medication. Documentation of folk's data so vital for our future. It's usually believed that herbal merchandise has not got any facet effects, interaction, however sadly isn't true. Thus, irrational observe of those medicine will cause numerous issues which might hinder the promotion of such medicine.

Research and development on dose, processing, techniques area unit the key want for any drug, however in herbal sector it's quite less compare to allopathic medication. Though in recent years, the trend is dynamic analysis to grasp the mode of action and MateriaMedica development, improvement/creation of monographs and reference standards for marker-based analysis area unit necessary of your time. Decisive gap in current ethno pharmacological and trendy healthful plant analysis is another downside for property, socio-culturally equitable and safe offer of herbal medicines. Unethical observe of herbal medication, lack of qualified doc, exposure of unreliable and dishonorable data, lack of spare fund, absence of centered selling and disapproval, lack of data sharing conjointly wait the worldwide promotion of herbalmedication. Lack of protection of diverseness and protective the standard healthful plants are an enormous challenge.

ISM industry can be broadly categorized into the organized and the unorganized sectors. Organized sectors include large manufacturing companies, hospitals, clinics, pharmacies, and authentic AYUSH wellbeing centers. Unorganized sectors are small

manufacturing product units, raw material cultivators, local vaidyars, small exporters, local pharmacies, local raw drug stores and extract manufacturers. According to marketing field, ISM industry can be broadly categorised into Products and Services categories. Ethical, classical, OTC, personal care and beauty products are coming under products category. Medical, well-being, payor and medical tourism services are coming under Services category. According to gauges, ISM is one of the quickest developing ventures with an expected compound yearly development rate (CAGR) of 23% from 2015 to 2020, and is relied upon to be a \$280 billion market by 2020. According to Confederation of Indian Industry (CII) & Frost and Sullivan report, the complete Ayurveda market to be around USD 3 billion out of 2016 and developing at a CAGR of 15-16%. Total Market Size of AYURVEDA INDUSTRY - 2016 - USD 3 Billion (Source from Frost & Sullivan and CII, 2017)





3. RESULT

In the field of Ayurveda and Unani many pharmaceutical companies have their own research centre. Dabur Research Foundation, Himalaya Health Care, Zandu pharmaceuticals, AvesthaGengraine Technologies, Reliance Life Sciences, Patanjali Research foundation Hamdard, etc are the leading centre having research area in traditional and herbal medicine. But in the field of Siddha system of Pharmaceutical Industry, only single private limited units named ALMAA Herbal Nature, Chennai have establishing the research and development centre. This centre is dedicated towards the research in evaluating the safety and effectiveness of traditional herbo mineral Siddha drugs and traditional health supplements meeting the WHO – ICH standards in promotion of export quality drugs.

Strength of ISM

➤ The diagnosis and management aspects found in ISM deals with the root cause of the disease and effective for the prevention of secondary complications.

➤ ISM recognized by WHO as a source of traditional and complementary medicine.

➤ The drug development duration in the field of ISM is minimal (3-4 years) by approaching reverse pharmacological studies on compared to other Allopathic Pharma Industries (10-15 years).

➤ The manufacturing process in ISM have traditionally designed background and well documented in Pharmacopeial literature.

➤ Cost effective treatment

Weakness of ISM

➤ Lack of globally accepted standards regulated by WHO-ICH

➤ Lack of integration studies with other conventional medicines

➤ Production of drug having variation in quality due to batch to batch inconsistency

➤ Lack of clinical trial reports to ensure the safety and efficacy including Pharmacovigilance analysis

Opportunities of ISM

➤ ISM shall be coupled with other conventional therapy which paves the growth of medical tourism by attracting one billion tourists annually

➤ Vast scope of research and innovation

➤ Having strong thrust area of research in the field of Non Communicable diseases

➤ Shall be approached as digital medicine

➤ Lot of schemes provided by the Government to promote industry under AYUSH cluster

➤ Better care providing for Geriatric people

➤ In modernized world, more people having trend towards utilizing herbal products for their health needs due to increasing concept of natural organic products

Threats of ISM

➤ Extinction of biodiversity

➤ Presence of well recognized brand products of other conventional systems such as Chinese, Latin and South American medicines

➤ Competition of neighbour countries such as Srilanka claiming the rights that Ayurveda and Siddha are their heritage

Steps to be taken in ISM Industry to capitalize global market

Certain objectives are mentioned in Vision Road Map to achieve USD 9 Billion by 2022 for Ayurveda industry by Frost & Sullivan and CII. With slight modification in the aspects of ISM industry, the following objectives shall be considered.

1. To increase accessibility and affordability
2. To attract investments to the AYUSH sector
3. To stand firmly that ISM shall be potential in preventive, curative and promotive health care
4. To create brand drugs in ISM

5. To promote Medical tourism related with AYUSH hospitals
6. To annex ISM in the Health Insurance Schemes
7. To develop a ISM based Nutraceutical Industry
8. To use digital technologies such as Mobile and Internet for E- Commerce.

Certain important urgent measures have to be done to achieve the goal is required. Formulating a correct ISM industry policy and attracting both investors from Indian and Global Corporates is a major achievement for the growth. Government shall support more cultivation and propagation of medicinal plants to the farmers by giving loans. AYUSH Ministry makes partnerships with private sector in opening Public hospitals. Creating MOUs between Universities, Academic institutions, Research Centers and Hospitals along various countries. Conducting more number of clinical trials under ICH guidelines and setting many Pharmacovigilance centers to report Periodic safety update reports of the marketing ISM drugs. Giving more funds to GMP certified ISM Industry in up gradation of their quality control processes in compliance to FDA.

Providing liberalization in tax payments and GST exemptions to the ISM industry. Allotting more grants for R&D works, clinical trials and setting instrumentation in the manufacturing units. Inclusion of all treatment modalities under AYUSH in the coverage of all national health insurance schemes rather than coverage while inpatient hospitalization. Encouraging mass cultivation of medicinal plants and ensuring 100% raw materials availability with high quality and

affordable pricing. Encouraging R&D for novel innovation and newer dosage form of ISM drugs.

4. CONCLUSION

There is an immense open door for Indian System of Medicine industry in worldwide fares regardless of various difficulties for the business, administrative experts and research foundations to conquer issues of value, adequacy, security and institutionalization to effectively contend in universal market. There likewise are numerous open doors for advancing Ayurvedic, Siddha and Unani training and eco-the travel industry dependent on Siddha including Varma and Thokkanam treatment and Ayurveda in India for global network. India as of now has sufficient foundation and advancement eco-framework set up to make enormous walks in these ways. In the interim, the difficulties of incorporating ISM in the entirety of its appearances with modern medicine and education will keep on existing.

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