

Date of Acceptance: 08th Apr, 2024Date of Publication: 16th Apr, 2024

CURRENT SCENARIO OF PHARMACEUTICAL & HERBAL MEDICINES & ITS FUTURE PROSPECTUS

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ABSTRACT:

The use of herbs in medicine is ancient. They have used for millions of years ago and are being practiced now. Due to the numerous benefits of herbal medicine, both developed and developing countries are now focusing on using it for medical purposes. India is known as the country of plants, and the basis of ayurvedic medicine is also found in Ayurvedic herbs. India is a rich and reliable source of known medicinal uses for herbal plants. Herbal medicine sometimes goes by the name of botanical medicine or phytomedicine. A World Health Organization survey found that 80% of people worldwide get their primary medical care from traditional herbal medicine.

KEYWORDS: *Traditional medicine, phytomedicine, humanism, and Ayurveda.*

INTRODUCTION

Currently, pharmaceutical medicines dominate the healthcare landscape, offering precise and potent treatments for various ailments. However, there's growing interest in herbal medicines due to their perceived naturalness and potentially fewer side effects. The future may see a blend of both, with pharmaceutical companies researching and developing drugs based on herbal remedies while incorporating modern scientific methodologies for efficacy and safety. This integration could lead to more personalized and holistic approaches to healthcare, with a focus on preventative medicine and individualized treatments. Current scenario of pharmaceutical and herbal medicines and its future prospects this is the guidelines highlight, the unique difficulties in properly keeping an eye on the security of herbs medications is an offer solutions. A mechanism for reporting negative effects of herbal medications is an investigation of herbal remedies that have been recorded receive extra focus.¹

The WHO has praised the proactive involvement of national pharmacovigilance centres and drug regulatory agencies in the creation of these guidelines. This has given these authorities a helpful place to start when it comes to enhancing communication, which is necessary to guarantee advancement toward their shared objective the safety of herbal medications. It is advised that herbal medications be covered by the national pharmacovigilance systems that are currently in place in the event these systems are not yet create that extensive national framework for pharmacovigilance be established.²

Poor reporting plans, fear of professional liability, lack of knowledge on the negative effects of herbal medicines, lack of methodologic homogeneity when it comes to measuring and identification, poor Details systems about the use of herbal medicines.

seriously impede its ability for many Member States to report negative effects of herbal medications, examine those reasons, and learn based on prior experience at the national level. There is currently relatively little information available about prevalence of unfavourable responses to herbal treatments, including their fewer than half of the member states of the WHO or prevalence.³ or about 90 nations, now control herbal medicines, according to a recent WHO survey, and even fewer have procedures in place for regulating or accrediting herbal medicine providers. Furthermore, there are differences in regulations throughout nations, which has significant effects on the distribution and accessibility of these products internationally.⁴

Background Information in History

Over the ages, humans have utilized natural products derived from natural sources and medicines. In particular, plant parts or complete plants have been used to treat help fend off illness. Although it is exceedingly challenging to the precise moment that public began using herbal medicine there are very old texts and other evidence that seem to point to this time.⁵

Approximately Emperor Shen Nung penned the Chinese text circa 2500 BC. "Pen Tsao," when discusses the usage of stem and leaves contains 356 remedies several includes which they still use today and also in future.^{6,7} The father of medicine, Hippocrates, authored over 60 works on medicine and focused mostly on human anatomy and physiology.⁸ As well as he proposed a humoral theory to explain that - the human body is composed of four humours: blood, phlegm, yellow bile, and black bile are primarily in charge of how the body functions both in healthy conditions and during illnesses.⁹

The Ayurvedic study is divided into eight branches, which are as follows:

1. General physician Kaya Chikitsa
2. Bhruthya Kaumara (pediatrics),
3. Psychiatry Bhutha Vidhya
4. Shalya (medical procedures),
5. Rasayana (rejuvenation therapy),
6. Agada Tantra (toxicology), and
7. Vajeekarana,
8. Vigor of sexuality.¹⁰

The WHO International Drug Monitoring Program and Pharmacovigilance

Its worries have recently expanded to encompass the following:

Herbs.

Conventional & Alternative medicine;

Blood products

Biological Medical equipment

Vaccinations

Pharmacovigilance's particular objectives are to:

Enhance patient care and safety regarding medication use and related interventions in medicine and paramedicine. Boost or enhance public safety and health regarding medication utilize Participate in the evaluation of the advantages, risks, and efficacy of medications, promoting their safe, sensible, and more

efficient use (including economical). Encourage knowledge, instruction, and clinical training in pharmacovigilance and its successful public outreach.

ACTIONS REQUIRED TO PROMOTE HERBAL DRUGS: ¹¹

1. Phytochemistry, the foundation of the herbal industry, promotes the use of natural medicines in modern medicine.
2. Isolation, purification, and characterization of novel phytoconstituents are anticipated.
3. Utilizing recently identified phytoconstituents as a “lead” chemical in the synthesis of analogues with decreased toxicity or enhanced therapeutic activity
4. Preservation of phytoconstituents in lead for use in significant medical products
5. Herbal drug discovery involves several practical aspects, including:
 - a) Botanical Identification: Proper identification of plant species based on botanical characteristics is crucial to ensure the correct plant material is used.
 - b) Chemical Analysis: Conducting chemical analysis to identify and quantify active compounds present in the herbs. Techniques like chromatography and spectroscopy are commonly used.
 - c) Bioactivity Screening: Testing herbal extracts or isolated compounds for biological activity using in vitro and in vivo assays to assess their potential therapeutic effects.
 - d) Safety Assessment: Evaluating the safety profile of herbal products through toxicity studies and determining potential adverse effects.
 - e) Formulation Development: Developing appropriate formulations such as extracts, tinctures, capsules, or creams to ensure stability, efficacy, and ease of administration.
 - f) Standardization and Quality Control: Establishing quality control measures to ensure consistency and potency of herbal products, including standardizing extraction methods and establishing quality parameters.
 - g) Clinical Trial: Conducting well-designed medical clinical for a evaluate How safe and effective are herbal medicines in all humans.
 - h) Regulatory Compliance: Adhering to regulatory requirements and obtaining necessary approvals for herbal products, including compliance with Good Manufacturing Practices (GMP) and regulatory guidelines specific to herbal medicines.

HERBAL MEDICINE SCOPES

Future Prospects of Herbal medicine/industry.

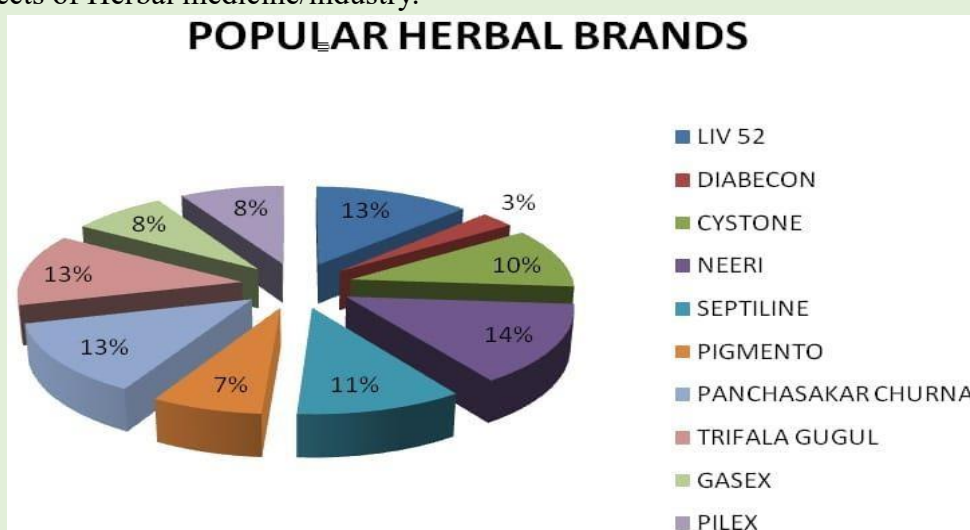


Fig. No.1: Popular Herbal Brands

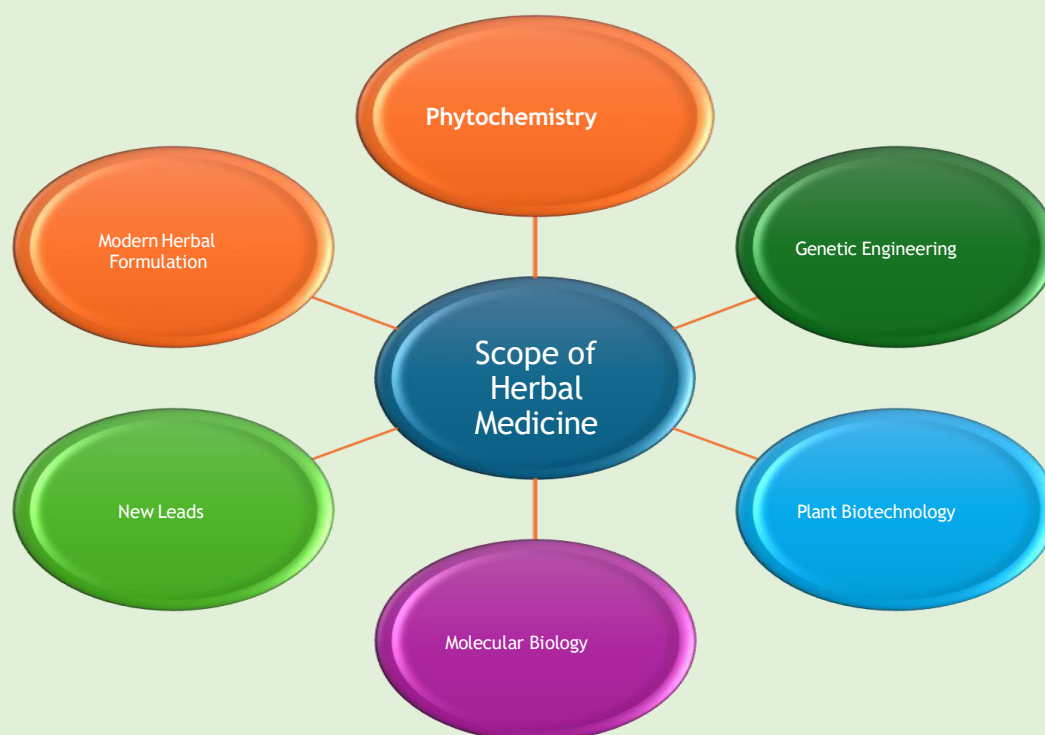


Fig. No.2.: Scope of Herbal Medicines

HERBAL DRUG DIFFICULTIES IN SUPERVISING THE SAFETY OF HERBAL MEDICATION

Control

The registration and national regulations pertaining to herbal medicines differ among nations. Herbal remedies may be classified as prescription or over-the-counter medications in states where they are subject to regulations. Consequently, the regulatory status dictates how these products are distributed or can be accessed.¹²

Difficulties Associated with Herbal Medicine Quality Control

GMPs, or good manufacturing practices states that accurate recognition of medicinal plant variety, specific storage conditions, and unique cleaning techniques are necessary for the initial materials' quality assurance. The primary obstacles pertain to ensuring the finalization of herbal medicinal product quality control, particularly those that are mixtures.¹³

Difficulties in Evaluating Safety and Effectiveness -Many hundred natural ingredients can be found in a single herbal remedy or therapeutic plant, and many times as many can be found in a blended herbal medical product. It may be very hard to analyze individual active ingredients in a product like this, particularly if it contains a combination of two or more herbs.¹⁴

Obstacles in the Way of Safety Monitoring of Herbal remedies.

Most producers of herbal medicines do not properly understand the value of taxonomy botany and documentation, which creates unique difficulties when it comes to the identifying and collecting the medicinal plants that are utilized to make herbal treatments. To remove the confusion produced by Known by several names, it is imperative for to employ the majority generally utilized binomial nomenclature seeking plants that are therapeutic. *Phytosphaery Absinthium L*, a plant with at least eleven usual names, has a substance in use component. Therefore, efficient oversight in herbal medication will necessitate efficient Cooperation amongst pharmacologists, phytochemists, botanists, and other key players.¹⁵

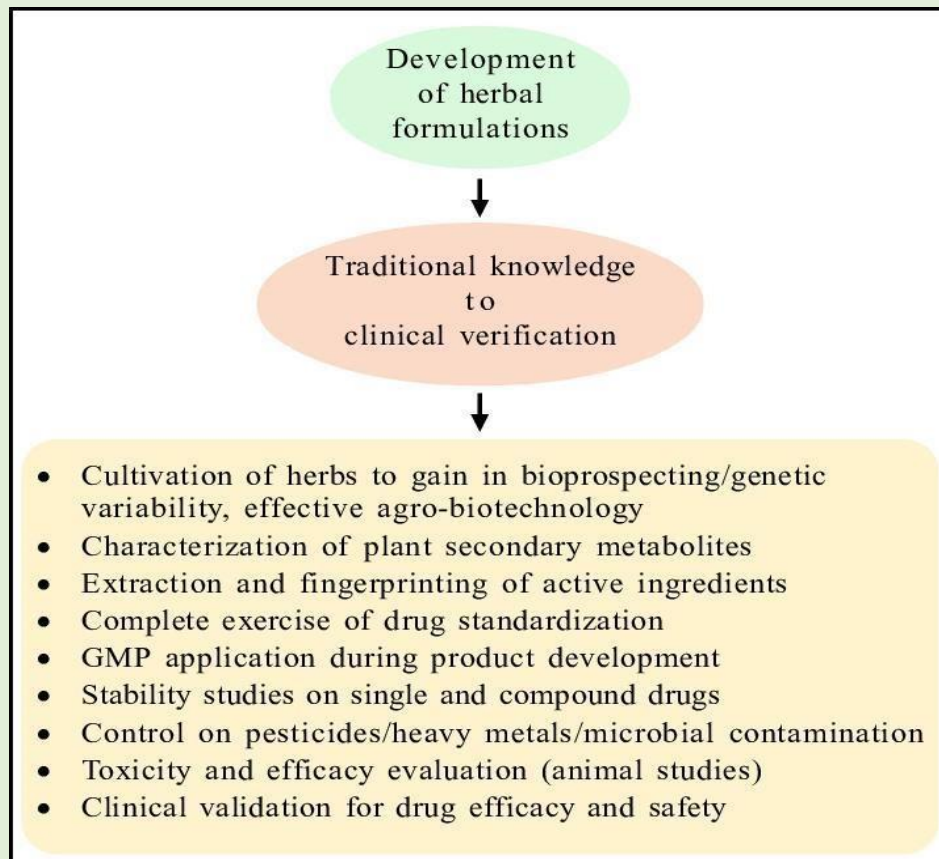


Fig. No.3.: Development of Herbal Formulations

HERBAL DRUGS' STATUS AT THE MOMENT:

One of the first goals the WHO initiative on Conventional medicine was intended to encourage practical method of approaching the topic. There appears to be progress being made in this direction, based on the realistic examination of traditional traditions by developed and developing nations alike.

Pursuing action along three lines—the present problem of training, integration, and evaluation.

Within conventional medicine, it's important to discern between fact and fiction in order to distinguish between safe and/or clearly useless techniques and therapies.¹⁶

Recently, the WHO executive board passed a resolution imploring Nations

- 1) To advance the employment of customary healers emerging nations of healthcare systems.
- 2) To provide additional funding for the advancement of conventional medical systems.

The medical community was also advised by the board to respect the established medical system. WHO acknowledges that two thirds of babies born worldwide are delivered by traditional birth attendants and that most impoverished people worldwide lack access to modern medical treatment. In order to provide everyone on the planet's basic health needs, it will be essential to use both.

The traditional and Western medical systems. The WHO also supports using the Traditional healers employed medicinal herbs and remedies to treat patients effectively. Many countries have formally acknowledged the traditional health system, including China, India, and Sri Lanka. Some of these plants are used to treat bronchial asthma in various combinations, such as the Nigerian plant bitter leaf, which kills mouth bacteria, and the Mediterranean herb Ammi visnaga, which is used as a remedy for pectoris angina; the Egyptian plant Proximus Cymbopogon, which is utilized to get rid of kidney stones; the Ghanaian plant Combretum origin, which is used to cure guinea worms.¹⁷



Fig. No.4.: Challenges in monitoring the safety of Herbal Formulations

HOPE FOR THE FUTURE OF HERBAL MEDICINE:

Trend since it aims to combine conventional practice with All traditional medicines, including those used in Ayurveda, Unani, and Siddha, must undergo scientific testing and validation before being used. About 350 formulations for various activities have already been validated by the Council for Scientific and Industrial Research (CSIR), New Delhi which is actively active in this field. This is a useful tool with current understanding to improve health. The WHO has underlined the necessity of employing contemporary methods to guarantee the quality control of herbs and herbal mixtures. To preserve the quality of their herbal products, several nations establish monographs and pharmacopoeias. For 80 prevalent conditions, the Indian Ayurvedic Pharmacopoeia suggests fundamental quality standards.

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The importance of herbal medicine is likely to increase In the future due to growing interest in natural remedies, concerns about pharmaceutical side effects, and advances in scientific understanding of plant-based therapies. Herbal medicine offers potential solutions for various health issues and can complement

conventional treatments. As people seek alternative and holistic approaches to healthcare, It is anticipated that demand for herbal medicine will rise. Additionally, ongoing investigation of the security and effectiveness of herbal treatments will likely further validate their role in modern healthcare.²⁰

First, research is done on the active ingredients in plants have a lengthy history of being used medicinally. The quest for previously undiscovered new species of medicinal plants and pharmaceuticals from the world's more isolated areas is the focus of the second area of fundamental research.

TOXICITY OF HERBAL MEDICINES:

Herbal medicine involves using plants, herbs, and natural substances to prevent, alleviate, or treat various diseases and health conditions. It's been practiced for centuries and is still widely used around the world. While some herbs have proven medicinal properties supported by scientific evidence, others lack substantial research. Before adding herbal remedies to your regimen, it's imperative to speak with medical specialists. This is especially true if you use medication or have pre-existing medical conditions, as herbs may interfere with conventional treatment.²¹

CONCLUSION:

Herbal medicine is widely used worldwide and is not just found in developing nations. Science and public interest in Plants have been crucial to the resurgence of herbal treatment, particularly in developed nations. By displaying an impartial knowledge of both alternative and conventional methods, the doctor can encourage a more candid and communicative connection with the patient who uses herbs but has mixed feelings about conventional care (Winslow and Kroll, 1998). Lastly, physicians ought to keep an eye on the apparent advantages and unfavourable consequences of patients' self-prescribed herbal remedies and considers the potential for drug-herb interactions. Patient with chronic illnesses is fond of herbal remedies, and medical professionals with traditional training are no longer able to disregard natural cures. They have to acknowledge that many patients are utilizing natural remedies. They need to be well-versed in herbal medicine and more willing to talk about it with their patients. When a patient discloses, they utilize herbal remedies, the doctor may be able to steer them toward more efficient traditional medical care.

A discussion to logically assess the suitability of herbal medicines and regulated medications in relation to the severity of the problem can be started by obtaining a thorough history of all drugs and supplements taken. Patients suffering from long-term illnesses like cancer or AIDS should also be cautioned such a portion of the side consequences of herbal therapies can mimic the signs of the ailment being treated, making it difficult to identify whether the problem lies with the "remedy" or the illness itself.

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