A Review Study on the Therapeutic Properties of Common Botanical Bloom

Aamena Zaidi, Assistant Professor, Department of Human Nutrition, University Institute of Health Sciences, CSJM University, Kanpur, aamenazaidi@csjmu.ac.in
Neha Shukla, Assistant Professor, Department of Physiotherapy, University Institute of Health Sciences, CSJM University, Kanpur.

ABSTRACT

It was observed that the use of botanicals as an efficient medicine to ward off infection and strengthen immunity rose to a higher extent during COVID-19. These plants have been used for centuries to treat a variety of infectious disorders. Common botanicals including ashwagandha, giloy, neem, and tulsi leaves are utilized as immune-stimulating, anti-carcinogenic, antibacterial, antiviral, anti-malaria, anti-common flu, anti-indigestion, anti-edema, and antiviral agents as well as antioxidants and antiseptics. The majority of the time, people utilized them to make kadha, a spice blend. These botanicals were employed as immune system enhancers in Indian cuisine because they included bioactive elements. People's knowledge was almost disappearing at a faster rate, but it came back during this era of Covid-19.

Botanical blooms, also known as medicinal plants, are a source of biologically active substances with therapeutic benefits that have been recorded and used for treating a variety of diseases over time by numerous groups of people. Selected medicinal plants discussed in this review—turmeric, cinnamon, coriander, garlic, ginger, cumin, tulsi, asafoetida, and clove are distributed throughout India. Studies about biological and pharmacological functions of the chosen medicinal plants are reported, as well as their phytochemical components. With an in-depth review of the literature data, this study intends to provide a collection of publications on the species of certain medicinal plants. India as a nation appears to be a source of traditional medicines that have not yet been thoroughly researched. This review will provide impetus for additional research on the pharmacological properties of Indian medicinal plant species.

Keywords-medicinal plants, phytochemical constituent, pharmacological activity

INTRODUCTION

Diseases and life are inseparably connected; wherever there is life, illnesses must exist. Men, women, children, and animal life were all dependent on one another and needed each other to survive. Potential markers for biological activities are provided by traditional usage of natural plant remedies. The use of medicinal plants in basic healthcare has sparked resurgence in public interest during the past few decades. As they are thought to be safer and more natural, herbal combinations used in alternative medicine are growing in popularity. But there is still a huge gap between the traditional medical knowledge of the region and modern medical sciences.

Despite the many remarkable achievements of western medicine, the fragmented approach used by modern allopathic medicine has not been able to address the rising number of environmental, lifestyle, and personal stress-related chronic degenerative disorders that plague modern society. Traditional herbal remedies and holistic health practices are playing a vital complementary role in the prevention and treatment of the passive sickness of modern civilization. The World Health Organization has advised that traditional health and folk medicine systems be combined with modern medical remedies in order to more effectively address health issues worldwide, realizing the necessity of widening the western medical perspective. There is growing evidence that the strong general adapto-genic capabilities of herbs and spices have great preventive and therapeutic potential for the stress-related degenerative diseases that are common in industrialized nations. **(Atal CK, et.al.1989)**

Ayurveda is widely practiced in India. We have a long history of treating a variety of disorders with plants or herbal remedies. There is a well-established traditional medical system in India, but as an industrialized medical system emerged due to its accessibility, quick alleviation, and availability, our ancient way of healing felt hampered. However, a large number of individuals

still rely on our old medical practices as their primary means of healing or first aid. (Chopra **RN, et.al 1956)**

Alternative medical practices like yoga and ayurveda have a great deal of therapeutic potential and are beneficial against COVID-19. The traditional Indian medical system known as Ayurveda, which derives its name from the Sanskrit words for Ayur means "life" and Veda means "science" and "knowledge," not only focuses on treating disease but also works to prevent the emergence of new ailments. Different photo-chemicals with a variety of therapeutic characteristics are found in medicinal plants. The potential to prevent acute respiratory infections with various dietary supplements and home treatments is enormous. Along with prevention, these substances also improve immunity to fight against different pathogenic pathogens. These homemade herbal cures for respiratory infections have excellent therapeutic potential. The use of plants for therapeutic and medicinal reasons to treat illness and enhance human health is known as herbal medicine or phyto-medicine. Plants have secondary metabolites known as phytochemicals that defend them from microbial diseases or pest infestations. These are the active substances that have therapeutic qualities and are therefore regarded as drugs or medicines. It is believed that plants utilized as food and traditional medicine will produce pharmacologically active substances. They have strong therapeutic efficacy, antioxidant activity, and no side effects in addition to being economically viable. In addition, they are a great source of biomolecules, vitamins, and minerals that the body needs to stay healthy. The body's growth and development is supported by the primary metabolites, which are organic molecules like glucose, starch, polysaccharides, protein, lipids, and nucleic acid. Alkaloids, flavonoids, saponins, terpenoids, steroids, glycosides, tannins, volatile oils, and other secondary metabolites are produced by plants. The ability of plants to treat disease is attributed to their secondary metabolites, which include alkanoids with antispasmodic, antimalarial, analgesic, and diuretic properties. Terepenoids have anti-inflammatory, anti-cancer, anti-malarial, antiviral, anthelmintic, and antibacterial effects. Antifungal and antibacterial activities are found in glycosides. Saponins have anti-viral, anti-inflammatory properties. **(Kumar Arvind et al.2016)**

Fig 1.1-Common spices used in Kitchen

Techniques to enhance immunity as well as sanitation of the hands, social isolation, and social distancing were considered. The use of traditional herbs and spices to boost immunity was popular.

The most fascinating works of nature's art have always been plants. They significantly contribute to the improvement of human health. Numerous traditional ethnic, local, or folk medical systems are used extensively throughout all of India. They are essential in sustaining and treating the numerous ailments that affect our nation's tribal people, the poor, and the general population.

People from all cultures around the world use herbal medicine, often known as people's medicine, which is one of the most well-known therapies for illness.
The majority of medications used to treat common illnesses are made from botanicals, such as morphine from opium poppy, digoxin from foxglove, quinine from cinchona bark, and aspirin from willow bark. Botanicals are still the principal source for many modern medications.
Even though pharmaceutical companies have succeeded in convincing people that they can heal ailments, most people still resort to botanicals as a source of treatment because they feel confident and satisfied. One of the main reasons why many people still do not have access to modern medicine is their high cost. In addition, the interaction between humans and the environment cannot be ignored. Natural sources are still seen as being healthier than synthetic medications. **(Govind P,et.al. 2006)**
People's trust in botanicals has increased during and after COVID-19. They were utilized as air-disinfectants, essential oils, immune system boosters, antiviral agents in coating wearables, and sanitizers for people and the environment.

SPICES AND HERBS

To strengthen immunity and combat infections, different fruits and vegetables, spices, and herbs from our cuisine were employed in accordance with their therapeutic capabilities. Indians employ herbs and spices in their cuisine in a variety of foods, including tea and other items. In addition to the common supplies found in our cooking, we also use arjun ki chaal, chironji, pipli, fig, lemongrass, and jaggery. Most people added bottle-guard juice, chia seeds, aloe vera, and khus-khus to their home pharmacies.
Turmeric (curcumin), ginger (gingerol), garlic (allicin), and other phyto-compounds including quinine, iso-quinoline alkaloids, and emetine, which have antibacterial, antiviral, anti-inflammatory, and immune-stimulatory activities, were common items with therapeutic capabilities in our kitchen. **(M. Ebadi 2002)** It was discovered that these botanicals have an impact in boosting immunity. A variety of herbal tinctures and food mixtures were used to treat wounds, boost immunity, and alleviate conditions like headache and stomach problems. Spices like cinnamon, clove, and turmeric have a positive effect on our food habits. Botanicals have been demonstrated to lower oxidative stress and increase the generation of antibodies, which improves a person's immunity.

Fig 1.2-Kitchen Pharmacy

The antiviral, antifungal, and antibacterial properties of garlic, ginger, and turmeric decrease blood pressure and combat infections. **(Krishnaswamy K, 2006; Rahman K, 2001)**

Sulfuric compounds found in onions and garlic serves to strengthen the body's immune system by enhancing the function of helper T and NK cells. Holy basil, also known as tulsi, is frequently used to reduce stress and improve immunological function**. (Yu-Yan Y, Liu L.2001)**
The spices we use in Indian cooking are full of nutrients and have health-promoting characteristics. (Table 1.1). The use of such spices as traditional cooking techniques quickly became popular during COVID-19. In an effort to shield humans from numerous ailments, they were employed for flavour, scent, colour, and beverages.

S.No.	Name of Spice/Herb	Therapeutic benefits	Usage
1.	Turmeric	Cancer preventive, antibacterial, hepatoprotective, cardio-protective, anti- inflammatory	Turmeric milk(haldi wala doodh)
2.	Cinnamon	Antiviral, anti-diabetic, antioxidant, anti-cancerous	Tea/ water
3.	Coriander	Anti-microbial, anti-oxidant, anti-diabetic, anxiolytic, anti-epileptic, anti-depressant, anti-mutagenic, anti-inflammatory, anti-dyslipidemic, anti- hypertensive, neuroprotective and diuretic	Added in vegetables for garnishing, chutney
4.	Garlic	Anti- microbial, cardio-protective, cancer preventive, hepato-protective, anti-inflammatory, neuroprotective	Added in vegetables and chutney
5.	Ginger	Antioxidant, anti- inflammatory, anti-carcinogenic, anti-microbial	Added in vegetables and tea
6.	Cumin	Immune stimulatory, nephron-protective, gastro-protective, antioxidant, anti-diabetic, antimicrobial, hepatoprotective and neuroprotective	As tadka, added in vegeables
7.	Tulsi	Anti-microbial, mosquito repellent, anticoagulant, anti-allergic, anti-tussive, anti-hypertensive, anti-asthamatic, anti-diarrheal and anti-pyretic	Water and Tea
8.	Asafoetida	Relaxant, neuro-protective, memory-enhancing, digestive enzyme stimulant, antispasmodic, hypotensive, hepato-protective, anti-microbial, anti-carcinogenic, anti-cytotoxicity, anti-obesity,anthelmintic, antagonistic	As tadka
9.	Clove	Anti-oxidant, anti-baxterial, anti-fungal, anti-viral, anti-carcinigenic	As tadka, in tea and water
10.	Mustard	Anticancer and anti-inflammatory	As tadka, as an oil for cooking medium

Table 1.1-Therapeutic benefits of various spices and their usage

India is regarded as the home of spices. They have a long history of use as natural remedies to treat various illnesses. Spices are often derived from plant parts such as seeds, fruits, roots, and bark that are used to flavour, colour, and preserve food. Due to its many climates, India produces spices in a way that is all its own and is utilized as a kitchen pharmacy by every home. Majors include peppers, fenugreek, coriander, turmeric, cumin, and so on. **(Warrier PK. In: Indian Medicinal Plants, 1995)**

CONCLUSION

Botanicals, a natural kind of medicine that we are gifted with, are not used to their full potential by us. Due to taste and aroma, we tend to go towards spicy foods today while ignoring the advantages, significance, and effects of botanicals on our health. Today, we place a higher value on flavour and rumors. We like frozen foods over fresh foods in season, commercial cosmetics

over herbal pastes, and many other things. It is time for us to value our cultural riches. Our immune system is boosted by the nutrients we consume and our body's ability to absorb them depends on the spices which are excellent bio-enhancers.

Traditional herbal medicines are highly dependent on modern medicine and work well as an alternative to it. Eighty percent of people still use traditional herbs as their main source of medicine, according to a survey by the World Health Organization. According to our traditional medical system, known as Ayurveda, these botanicals offer chemicals and other secondary metabolites that are beneficial for therapies. This approach supports the use of herbs, decoctions, and other plant-based remedies that can effectively treat illnesses. Thousands of medicinal formulations are utilized as dietary supplements in India, where millions of people continue to practice traditional medicine.

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