



Research Article

TRADITIONAL AND INDIGENOUS PRACTICES OF SOME MEDICINAL PLANTS AS IMMUNITY BOOSTERS BY FOLKLORE OF MANDI DISTRICT, HIMACHAL PRADESH

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ABSTRACT

Himachal Pradesh being a hilly State is one of the top repositories of various herbal plants of medicinal aspects. District Mandi, popular as Varanasi of Hills, is one of the twelve districts, with great variations in elevation which provide a suitable habitat for the rich biodiversity of flora and fauna. The present paper aimed to document indigenous uses of some therapeutically significant plants which have been utilized by folklore to improve their immunity and to cure immunity-related diseases like cough, cold, and allergies. Indeed, even today when the Corona pandemic has influenced the whole world gravely, provincial fables of the State have kept themselves safe and have indicated their confidence on these plant assets which are being utilized by their predecessors for ages. Herein 21 species belonging to 17 families used as immunity boosters are compiled (8 herbs, 6 shrubs, 6 trees, 1 climber) used by folklore to enhance their immunity. Documentation of traditional knowledge is the need of the hour as it the base of the Naturopathy and Ayurveda. The documentation of the traditional medicinal knowledge will give another point of view to herbal drug researchers for extending and improving the utilization of botanical drugs and their therapeutic applications. Plant-based natural products offer an infinite source of compounds to help to design the pharmacologically important molecular products and novel drug discovery as well.

KEYWORDS: Traditional knowledge, Immunity, Ethnomedicinal, Mandi, Himachal Pradesh.

INTRODUCTION

Forests are the reservoir of the herbs, shrubs, and trees that have a deep-rooted bond with the rural people and their lives. The Indian Himalayan Region is one of the richest reservoirs of biological diversity in the world and is considered as a "Store House" of the significant medicinal plants. The natives of the Himalayan region utilize the plant resources in many forms, i.e., food, fuel, fodder, medicine, timber, fiber, rituals, religious works, making agricultural tools, cattle beds, and various other purposes^[1-2]. Among all the benefits, medicines play a significant role for ages. The human healthcare system is always benefited from traditional knowledge. In ancient times, most of the medicinal formulations were based on plants or parts of plants either in simple or complex forms. The utilization of plants for the treatment of various ailments is still practiced all over the world. Even today, the base of many drug developments is the plant or part of the plant. The use of plant-based medicines is growing nowadays because of their moderate costs, fewer side effects, and easy availability. Among many ailments, cough, cold, and allergies are the most commonly occurring

diseases of the hills due to the harsh winters, frequent seasonal changes, pollens, etc. Indeed, even today when the Corona pandemic has influenced the whole world gravely, provincial fables of the State have kept themselves safe and have indicated their confidence on these plant assets which are being utilized by their predecessors for ages. The majority of the population (92%) lives in villages and belong to diverse culture and communities, with specific traditional knowledge.^[1] The rural areas, especially high altitude zones of the district are devoid of modern medical facilities and therefore their dependence on these plant resources is natural. Herein an effort has been made to compile the plants used by rural folklore dwelling in Mandi district.

Review of Literature

Several ethno-botanical studies have been carried out in the state Himachal Pradesh, north-western Himalayan region.^[2-12]

First time collected plants from Mandi in the first half of 19th Century.^[13] Some botanists reported some plants from District Mandi^[14-15]. Singh P.B.^[16-17]

enumerated Flora of the District Mandi in details but with little emphasis on utilizations. Uses of plants in controlling the different diseases in Mandi district is also documented in brief but with no special reference on immunity boosting and cough cold^[18-19]. Seth M.K. & Sharma R. (2020) described the role of rural women and their role in plant conservation in District Mandi.^[20]

Study Area

Mandi district is situated between 31°72'N latitude and 76°92'E longitude and covers a geographical area of 3950 km². It is bounded by Kangra district in the North and North West, Hamirpur and Bilaspur district in the West and by Kullu district in the East. It occupies second rank among the twelve districts in the population rate. The altitude varies between 503 meter and 4034 meter asl. District Mandi is surrounded by Dhauladhar, Ghogardhar, Sikandar Dhar and Vairkot Dhar. Beas and Sutlej are major rivers in the District. The district receives abundant rainfall.

MATERIAL AND METHODS

Different methods were adopted for ethno botanical data collection. Surveys were conducted in the district from 2016-2019. A free list technique was

used to get information about the knowledge of plant resources, the common diseases they face, and the remedies adopted by them from informants who proved very helpful to get information from illiterate people. A formal questionnaire was also framed to get more information from informants. All plant species were arranged alphabetically which included botanical name, family, vernacular name, habit, and their utilizations. The plants were identified with the help of existing standard literature available on the flora of the region^[21-23].

RESULTS AND DISCUSSIONS

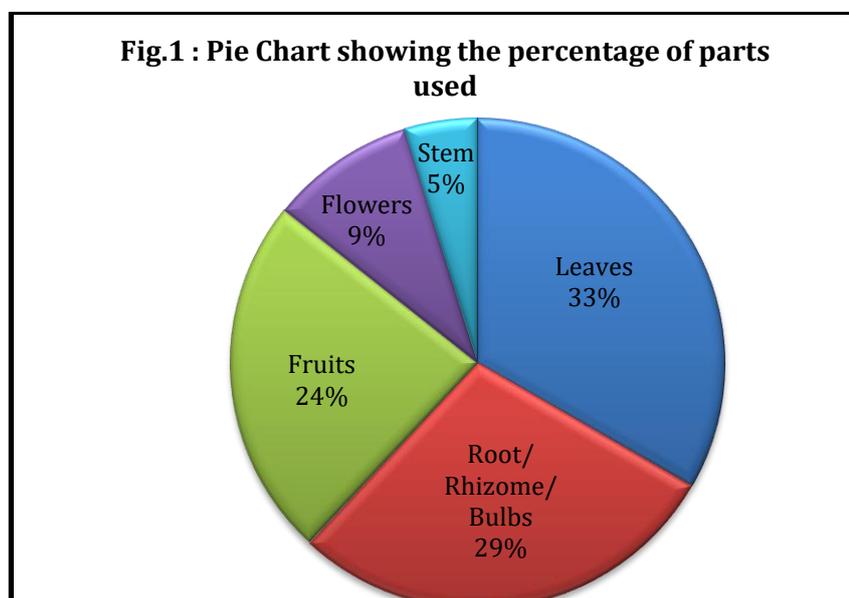
In the present study, it was found that 21 species belonging to 17 families are in use by the folklore of Mandi district for the cure of cough, cold and allergies related to immune system, out of which 13 belong to dicotyledons, 7 belong to monocotyledons and 1 gymnosperm. Distribution of plant according to their habit it was recorded that herbaceous species were markedly high (8) followed by shrubs and trees (6 each) and climber (1) (Fig-2). Majority of these plants are available from mid of summer to end of the rainy seasons. The dominant part of the plant used are Leaves (7) followed by Roots (6), Fruits (5), Flower (2) and Stem (1) (Fig.1)

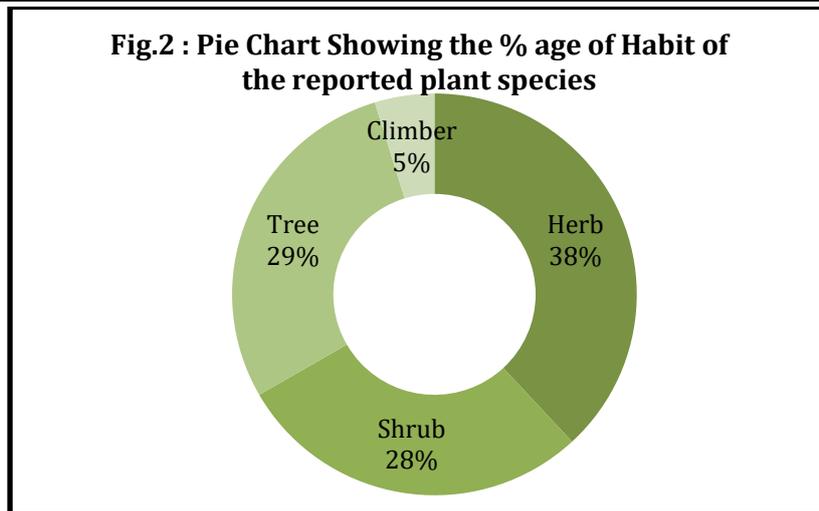
Sr. No.	Botanical Name	Vernacular Name	Family	Part (s) Used	Habit	Utilization
1.	<i>Achillea millefolium</i> L.	Gandhana	Asteraceae	Flowers, Young leaves	Herb	Infusion of flowers and young leaves is consumed as "Kaadha" to cure cough, cold and fever. The use is refrained by pregnant women as its consumption may cause abortion in first trimester.
2.	<i>Acorus calamus</i> L.	Vach, Barey	Acoraceae	Rhizomes	Herb	Utilized as a congestion remedy for newborn children. Scoured with mother's milk and is applied over temple region of forehead, nose and chest of newborn children for instant relief in congestion. Fresh rhizome is chewed empty stomach to cure respiratory problems
3.	<i>Allium cepa</i> L.	Pyaz	Alliaceae	Bulbs	Herb	Raw bulbs considered to be a blood purifier and to keep away the allergies.
4.	<i>Allium sativum</i> L.	Lahsan	Alliaceae	Rhizomes	Herb	Fresh garlic leaves, along with <i>Dhania</i> leaves (<i>Coriandrum sativum</i>), green

						chillies (<i>Capsicum annus</i>), Galgal (<i>Citrus maxima</i>), salt and sugar/ jaggery, are made into a much sought after winter dish called 'Khatta/ Murabba', and consumed especially by ladies and girls. It is believed to provide warmth to the body and immunity against cough, cold.
5.	<i>Aloe vera</i> (L.) Burm.f.	<i>Kware</i>	Xanthorrhoeaceae	Leaves	Shrub	Juice obtained from the pulpy stem consumed empty stomach for boosting immunity.
6.	<i>Asparagus adscendens</i> Roxb.	<i>Sahasrapaii</i>	Asparagaceae	Root tubers	Shrub	Powdered roots along with milk administered for strength, vitality and immunity boosting.
7.	<i>Cinnamomum tamala</i> (Buch.- Ham.) T.Nees & Eberm.	<i>Tejpatta</i>	Lauraceae	Leaves	Tree	Leaves consumed as infusion in tea to relieve cough & cold.
8.	<i>Citrus limon</i> (L.) Burm. f.	<i>Nimboo</i>	Rutaceae	Fruit	Tree	Juice is consumed as Immunity Booster and protection against cough & cold.
9.	<i>Citrus maxima</i> (Burm.) Osbeck	<i>Chakotra</i>	Rutaceae	Fruit	Tree	Eaten raw by the people during winters to keep themselves protected against cough and cold.
10.	<i>Curcuma longa</i> L.	<i>Haldi</i>	Zingiberaceae	Rhizomes	Herb	The powdered rhizomes are considered one of the best immunity boosters, anti allergic, wound healer. The rhizome powder is taken along with milk before bedtime.
11.	<i>Justicia adhatoda</i> L.	<i>Basutui, Bashti</i>	Acanthaceae	Leaves	Herb	Fresh leaves chewed to cure cough, cold, asthma and lung complaints.
12.	<i>Morus alba</i> L.	<i>Cheemu</i>	Moraceae	Fruits	Tree	Fruits edible; considered the best immunity booster during summers.

13.	<i>Ocimum kilimandscarium</i> Gurke.	<i>Baramaasi Tulsi, Karpur Tulsi</i>	Lamiaceae	Leaves	Shrub	One of the most effective remedies for cough and cold and a good Immunity Booster Leaves boiled and the decoction consumed to cure cough and cold. Leaves infused with the Tea leaves (<i>Thea sinensis</i>) and milk and used as tea. Decoction is given to infants to relieve from cough and cold.
14.	<i>Ocimum sanctum</i> L.	<i>Tulsi</i>	Lamiaceae	Leaves	Herb	Leaves (5 in no.) are consumed empty stomach to enhance the immunity of especially aged people. The leaves are boiled and the decoction is given to the infants to cure cough and cold. The decoction of leaves is taken along with honey and <i>Pipali</i> to cure hoarseness and cough.
15.	<i>Phyllanthus emblica</i> Linn.	<i>Amla</i>	Phyllanthaceae	Fruit	Tree	Fruits powdered and consumed with honey to treat chronic allergy problems related to seasonal changes. The fruits are consumed raw, as pickles and <i>Murabba</i> - considered to balance " <i>Tridosha</i> " of the body. One of the best anti allergic and immunity booster. "Amla k Khichadi"- popular ritual of valley celebrated in the outset of winters as a way to consume its fruit.
16.	<i>Piper longum</i> Linn.	<i>Magha Pipali</i>	Piperaceae	Fruit	Shrub	A very good remedy against allergic problems. The fruit powdered along with <i>Misri</i> and consumed empty stomach to relieve <i>Urticaria</i> . The powdered fruit is taken along with honey and <i>Tulsi</i> drops to relieve cough and cold.
17.	<i>Taxus wallichiana</i> Zucc.	<i>Rakhal</i>	Taxaceae	Leaves	Tree	Leaves considered being rich in antioxidants. Consumed as decoction during winters to keep

						themselves away from cough and cold.
18.	<i>Tinospora sinensis</i> (Lour.) Merr.	<i>Gulje, Giloy</i>	Menispermaceae	Stem	Climber	One of the best immunity boosters found in the hills. The stems cut into small pieces, boiled in the water and kept overnight, consumed empty stomach. This is believed to be the best detoxifier, rejuvenator and immunity boost. Many people boil the stem along with milk and consume during bedtime, considered it an excellent immunity booster
19.	<i>Viola canescens</i> Wall.	<i>Banafsha</i>	Violaceae	Flowers	Herb	One of the most trusted remedy of cough and cold since ages. One of the main ingredients of Tea in the hills during winters. The decoction is also taken as honey and Tulsi (<i>Ocimum sanctum</i>)
20.	<i>Withania somnifera</i> (L.)Dunal	<i>Ashwagandha</i>	Solanaceae	Leaves	Shrub	Leaves are chewed empty stomach for rejuvenation, vitality and for boosting immunity.
21.	<i>Zingiber officinale</i> Roscoe	<i>Adrak, Aadra</i>	Zingiberaceae	Rhizomes	Shrub	Consumed as a spice and medicine for cough, cold and as immunity booster. Main ingredient of tea during winters.





Cough and cold are the most commonly occurring problems in the hills especially during winters and the rural people still have faith in the medicinal plants that are mostly available around them. But the knowledge of utilization method and the medicinal value of the plant is restricted to the elderly people only. There is a famous old saying in the hills “*Jethi Bana, Basuti, Bare, Tethi maanu kiyam mare*” which simply means that the one who grows *Vitex negundo*, *Adhatoda vesica* and *Acorus calamus* near their home, they live a long, healthy life. Such solid, profound established convictions in the plant assets are one reason for the wellness of folklore and a strong immune system. Though the entire nation is being influenced by Corona, Himachal Pradesh is still on the more secure note as a result of the utilization of the plant assets and accepting them as custom, as an essential aspect of their way of life. Medicinal plants are Major Players of the Pharmaceutical Industry. As they already play an important role in the uplifting rural economy, but proper marketing strategies should be there for proper commercialization of these wild resources. During the last few decades, the forests are receding away and so many of these medicinal plants as well. So proper documentation of their availability and utilization is important for their propagation and conservation strategies. Low-value, high-volume species commonly occur at lower altitudes, while high-value species, extracted in smaller quantities are found at high altitudes. Sustainable extraction is the most challenging issue in the medicinal plant's sector. Documentation of traditional knowledge is the need of the hour as it the base of the Naturopathy and Ayurveda.



Gandhana (*Achillea millefolium* L.)



Bare (*Acorus calamus* L.)



Tejpatta (*Cinnamomum tamala*
(Buch.-Ham.) T.Nees & Eberm.)



Chakotra (*Citrus maxima* (Burm.) Osbeck.



Basuti (*Justicia adhatoda* L.)



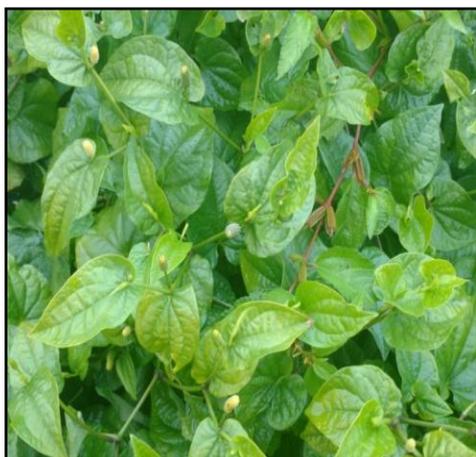
Cheemu (*Morus alba* L.)



Karpur Tulsi (*Ocimum kilimandscharium*
Gurke.)



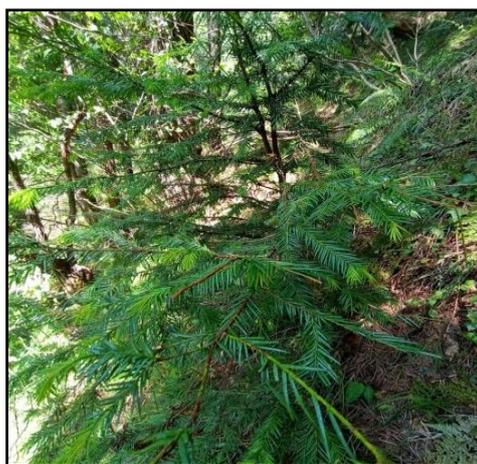
Tulsi (*Ocimum sanctum* L.)



Magha Pipli (*Piper longum* Linn.)



Giloye (*Tinospora sinensis* (Lour.) Morr.)



Rakhal (*Taxus wallichiana* Zucc.)



Banafsha (*Viola canescens* Wall.)

CONCLUSION

Because of the inherent side effects of the synthetic chemical used in allopathic drugs, the population in India including Himachal Pradesh has switched over the traditional system of medicines (herbal medicines) for the treatment of primary health care. Ayurveda is an old system of medicine that has become nowadays as an alternative to conventional medicine. The TSM (Traditional System of Medicine) is practiced by folklore for ages and needs to be documented so that this valuable knowledge may not be lost in the glitter of the Allopathic medication framework. The documentation of the traditional medicinal knowledge will give another point of view to herbal drug researchers for extending and improving the utilization of botanical drugs and their therapeutic applications. Plant-based natural products offer an infinite source of compounds to help to design the pharmacologically important molecular products and novel drug discovery as well.

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