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# HODOPATHY PRACTITIONERS: DEMANDING SPACE IN URBAN INSTITUTIONS AND INCLUSION IN AYUSH

Dr. Pragya Shukla<sup>a</sup>, Mr Sudhir Kumar<sup>b</sup>, Mr.Nishant Nirvana<sup>c</sup>

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## Abstract

*HO* community of Jharkhand exhibits deep faith and reverence for Hodopathy or folk medicine and traditional practitioners. The traditional healers are revered and socially empowered. The methods of healing used by traditional healers are acquired through spiritual modes. The efficiency and effectiveness of traditional practitioners were especially noticed during the Covid 19 pandemic. While there was a rush for hospitals in the urban spaces, folk medicines prescribed by the traditional practitioners were enough for the Ho community members of West Singhbhum in Jharkhand. Fieldwork and interviews revealed that the *HO* community members remained safe during Covid 19. Few cases, when reported, were administered herbal medicines. But acceptability in the urban space is yet to come. Experiences during Covid 19 pandemic have promoted the use of herbs as complementary or integrative medicine but conventional practitioners of medicine are still apprehensive. Tribal activists spread awareness about the materiality of traditional knowledge and the doctors demand double-blind lab reports of the chemical constituents of the herbal medicines used by traditional practitioners.

**Keywords:** Hodopathy, Covid 19, Medicinal herbs, Traditional practitioners, Sustainability, Inclusion in AYUSH.

<sup>a</sup>Assistant Professor, Department of English Studies, Central University of Jharkhand, Ranchi 835222, India

<sup>b</sup>Assistant Professor, Amity School of Communication, Amity University of Jharkhand, Ranchi 834002, India

<sup>c</sup>Research Scholar, Department of English Studies, Central University of Jharkhand, Ranchi 835222, India

E-mail:pragya.shukla@cej.ac.in

skumar2@rnc.amity.edu

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## Introduction

The traditional practitioners of Jharkhand helped many people stay healthy and corona-free during Covid 19. Their traditional knowledge and tribal consciousness, belief in the magic of herbal potions, herb healers, and the powers of Nature have kept them going through thick and thin. The realization that the Earth is a living being and needs to be nourished and rejuvenated is deeply ingrained in their system. They revere their hallowed space which consists of the forests, the soil, and the hills. They were unscathed during the pandemic and their success has heightened their belief in the ancestral knowledge possessed by them. They are not worried, come what may, no harm can ever befall them as they have adhered to the 'natural lifestyle' that all the earth dwellers were supposed to lead.

The belief systems of the tribal communities teach them to transcend material gains and coexist peacefully with Nature and their people. Their archaeology of knowledge is constructed with texts but not books. Their rocks and their trees, their forests, and their people are their texts and their Wikipedia. If the tribal communities are allowed to live unhindered amidst their Gods, forests, and people, they will become examples of exemplary lives, the best way to be.

## The Folklore About Dhantari

The story about the tribal chief, Dhantari, is well-known and often shared by traditional practitioners. The story has many variants. Most popularly it is believed that Dhantari possessed an innate knowledge of the medicinal properties of plants. He prescribed the herbs growing around his abode and cured people of their diseases. When Dhantari was about to die, he asked his fellowmen and all creatures around to consume him while there was still some life left in him. The humans, birds and animals who ate his body parts inherited

some of the herbal knowledge possessed by Dhantari. Hence, the tribal communities believe, birds and animals know how to cure themselves of their diseases. The humans who consumed Dhantari's flesh became traditional practitioners. The tribal community members lament that Dhantari is now known as Dhanvantri and is now worshipped as the God of Ayurvedic medicine.<sup>1</sup>

## Traditional Practitioners: Their Methods

Traditional healers treat more than 80% of the members of their community—serving concurrently as psychologists, sociologists, physicians, spiritual leaders, and magicians. Although medical practitioners are available in the area, few can afford to pay the consultation fee or buy the prescribed medicines. Moreover, the deep trust of the community members in the traditional healers dissuades them from going elsewhere.

It is also widely believed that the tribal population living in rural areas is nurtured, nourished on farm fresh food, and has a strong immunity system. Hence medicinal plants work well in their case. A majority of tribal community members, especially members of the Ho tribe of West Singhbhum, Jharkhand continue to harbor faith and reverence for folk medicine and faith treatment. The modern system of medicine has not been able to win the trust of many. Carstairs in his book *Health, Culture, and Community* shared:

...allopathic medicine does not fit into the social system of tribal communities. The tribals seek to pay after they are cured and are also bewildered by the questions posed by the doctors. Traditional practitioners diagnose the disease without seeking details from the patients<sup>2</sup>. (Carstairs)

Traditional healers offer prayers for the welfare of the sick and prescribe herbs for their speedy recovery. They share that they

were 'called' Evidence of 'calling' can be spotted in children as young as three. During an interview in Brambe, the mother of a four-year-old boy disclosed that her son was going to be a healer like his grandfather because the child reflected the sagacity of his departed ancestor. Members of the little boy's family respect his judgment and consult him before they make important decisions. Once such individuals are 'spotted', they may be apprenticed to a healer for up to 15 to 20 years, during which they learn a great deal about rituals, human nature, and healing properties of plants, bark, roots, etc.

The influence of traditional practitioners on the lives of community members is immense. They are blessed with the powers of prediction. They do not simply offer a mechanical recitation of alternatives but they carefully select and blend the energies in accordance with the patient's unique situation. The knowledge of the herbs is a closely guarded secret within tribal communities. A traditional practitioner revealed that some of the herbs used are revealed to them in dreams.

Traditional healers accomplish their task with the help of their ability to interpret and communicate the sacred stories which have survived thousands of years of oral tradition. The interpersonal techniques used by traditional healers impact the physical, interpersonal, and interactional worlds of each of their clients. They, however, lament that despite their experience and knowledge, their skills and efforts are largely unsung. Most of the urban dwellers, who have drifted away from the natural way of being rely more on synthetic drugs sold in medical shops. Traditional practitioners are not taken seriously and are often amusingly shirked off as a 'quack' or Jhola chap. They suffer this discrimination because no money has been spent on the acquisition of the traditional knowledge that they possess. This world has learned not to take notice of things that come for free.

Traditional Practitioners, undeterred by all accusations and mockery, perform their duties selflessly. They managed to save many lives during Covid 19 pandemic and their rate of success was quite high. After successfully administering herbal cures during Covid 19, around 4000 healers have come together and formed an association. They are prepared for the worst now because they know that the trees in the forests of their sacred land can cure all diseases.

Nirmal Kumar Awasthy, a member of Traditional Healers Association Bilaspur, Chhatisgarh pointed out the difference between Ayurveda and traditional healing methods in an interview: "Most Ayurveda medicines come as tablets, syrups and largely packaged, hence, have preservatives added to them. The tribal healers, on the other hand, first examine the patient, then make the medicine fresh for five to seven days after which a fresh batch is made."<sup>3</sup> Sustainability is a key ingredient of the practices of traditional practitioners. They use the natural resources judiciously, always careful not to bring harm to the ecosystem.

PP Hembrom, Director of Hodopathy Ethno Medicine Research and Development Centre and Phulin Mahila Chetna Vikas Kendra proudly proclaimed. 'Tribes across India have the collective knowledge of around 4000 herbs and plants and their medicinal use, while Ayurveda is so far able to deal with only 400 herbs and plants... Herbal Medicines have no side effects but a patient must commit himself to a liquid diet during the treatment. Nature heals. The blessed biodiversity of flora in this land of the forest has the answer to many health issues. The unique tradition of our ancestors is in danger of being abandoned due to the absence of awareness of the community.'<sup>3</sup>

## Sustainable Practices of Traditional Practitioners

Amidst the prevailing mindless practices in the present, which are dominated by short-term gains, profit maximization, and material progress, the tribal communities mourn the ever-worsening environmental malaise. Promoting and protecting the health of the ecosystem is essential for sustainability. They consider the groves as sacred spaces and believe that their gods often descend upon the trees in the forests. Their ancestors, it is believed, dwell in the medicinal herbs that flourish in the forests. Hence, medicinal herbs are revered, prayers are offered, and permissions are sought before plucking any part of the plants. Utmost care is taken in the process. After the large success attained by traditional practitioners during Covid 19, some knowledge about the herbs used therein has seeped out into the open. This has led to a mad rush into the forests. People have mindlessly begun to tear out the medicinal plants. The traditional practitioners fear that very soon no herbs will be left in the forest. They have started developing small medicinal herb gardens in their villages but lament that the herbs that grow in the forests are endowed with the blessings of their ancestors and are more effective.

## Traditional Knowledge, Intellectual Property Rights, and Reluctance to Give Recognition

Traditional knowledge is the knowledge, skills, and practices that are inherited, sustained, and passed on to the next generation. Traditional Knowledge is culture-specific, context-specific, dynamic, and adaptive. In dialogues related to conventional property rights systems and traditional knowledge, contenders demand patenting, trademarking, and protection of confidential information. It is feared that if action is not taken now, outsiders will not only mint favors but also legally abtain the possessors of traditional knowledge from using that which was always theirs. The biggest obstacle here, it seems is that the

traditional knowledge possessed by the tribal communities, and the knowledge of herbs possessed by traditional practitioners are all in the oral form. World Intellectual Property Organisation has developed a toolkit to help document traditional knowledge. They are also working on 'positive protection' of traditional knowledge which includes preventing unauthorized use of traditional knowledge and active exploitation of Traditional Knowledge by the originating community itself. There is an urgent need, however, for *sui generis legislation* for the protection of the traditional knowledge possessed by the tribal communities.

Studies conducted worldwide reiterate the appropriateness and efficacy of the medicinal herbs used by traditional practitioners. Traditional Practitioners of the Ho Community of Jharkhand treasure their traditional knowledge and revere it as a part of their cultural identity. They fear sharing it and are suspicious of its misuse. Ethnomedicine or Hodopathy used by the tribal community members is indispensable for sustainability. Education has made community members aware of their rights. They now demand integration in the Ayush Department.

## Material and Methods

### Study Area

The study was carried out in West Singhbhum which is one of the twenty-four districts of Jharkhand. The district spreads from 21.97°N to 23.60°N and from 85.00°E to 86.90°E. Situated at an altitude of 244 meters above sea level, the district spreads across an area of 7629.679 km<sup>2</sup>. The district is named after *Singabonga*, the principal deity of the Ho community. The present study is a micro-regional case study of the villages of West Singhbhum. The objective of the study was to determine the names of the medicinal herbs used by the traditional practitioners of the area to combat Covid 19, their efficacy, and to understand if the practices of traditional practitioners were holistic.

## Data Collection

The primary field survey was conducted in West Singhbhum from July 2022 to February 2023. The prime objective was to collect information about the medicinal herbs used by the traditional healers of the Ho community during Covid 19 and to investigate the possibility of integrating traditional knowledge with medical science. In this study, a sample of 50 respondents participated, 26 females and 24 male members from the community were interviewed after explaining our objectives and seeking the respondent's consent. While young and old members were included, children were excluded from the sample study.

## Methodology

A qualitative study was conducted in Sonua block, West Singhbhum district of Jharkhand, dominated by the Ho tribe from June 2022 to February 2023. Regular field visits and guided tours were carried out. The snowball sampling method was used to select participants. Data was collected with the help of structured and unstructured questionnaires and interviews. Prior informed consent was taken before the interview. After establishing a rapport with the traditional healers and conventional medical specialists, questions were asked and some of the questions were reformulated and simplified for convenience. The interviews of traditional healers and medical practitioners were recorded with an average duration of 30 to 45 minutes. Later, the standard literature and recent works of some botanists were reviewed for cross-verification of the accumulated data.

## Socio-economic and demographic profile of respondents

West Singhbhum district is spread across an area of 7224 km<sup>2</sup>. The district is interspersed with hills, valleys, steep mountains, and deep forests. There are many waterfalls and a large variety of flora

and fauna. The district contains large deposits of iron ore which is increasingly being used for steel production. West Singhbhum District consists of 3 Sub-Divisions, 18 Community Development Blocks, 15 Revenue Anchals, and 216 Gram Panchayats. There are 1792 Revenue Villages in the District. The district contains one of the best Sal forests and the Saranda (Seven hundred hills) forest area is quite renowned. Saranda division is endowed with four forest ranges viz., Samta, Koina, Sasangda, and Gua.

The population density of the area is approximately 208 inhabitants per square kilometre. There are around 1642 villages in the area. The respondents were informed that there were around 3,02,046 households in the area. 2,57,294 households dwelled in the rural areas and 44752 households were in the urban area. Most of the households in the rural areas belonged to the Ho community members.

## Medicinal herbs and Traditional Healers

Ho community members, especially the middle-aged and aged members, possess vast knowledge about the medicinal properties of plants growing around their habitat and those that grow in the forests. Traditional practitioners rarely take any money in exchange for their services. They believe that taking money will adversely affect their healing skill. P.C. Joshi in his essay 'The World of Tribal Healers', while discussing traditional healers shared:

The knowledge of herbs is a closely guarded secret and it is not revealed to others. A person may not even talk about it with his own family members ...herbal medicines are thus perpetuated in a family for generations together. Another characteristic feature of herbs is that they are always associated with a sacred value. A medicinal herb is not equivalent to the pills of a doctor. There are always certain ritual procedures that must accompany a herb. In many instances, there are

incantations that are whispered when a herb is applied. For instance, some herbs require incensed smoke before application. In other cases, the use of sacred numbers accompanies the application of herbs. For instance, the herb is applied seven times in a sitting”<sup>4</sup> (joshi)<sup>4</sup>

The traditional practitioners, keeping in view the sustainability of their healing methods, never collect the herbs in advance but possess a fair knowledge of their availability in the nearby forests. They usually go to gather their herbs from the forests on Thursdays. On these days their mini roadside clinics remain closed.

### **Covid 19 in West Singbhum**

COVID-19 (Coronavirus disease 2019) was a transmissible disease spread through the new virus strain SARS-CoV-2, which was originally detected in Wuhan city of China. The infection had outspread globally and the consequences in most urban areas were fatal. During our fieldwork in West Singbhum, the respondents informed us that cases of Covid 19 were very rare in the villages of the area. During the lockdown, a few cases were registered with the return of some migrants from cities. The government quickly sealed the areas housing suspected Corona cases. None of them went to the hospital although. The herbal medicines prescribed by traditional practitioners were enough for them. Green leafy vegetables, edible flowers, rice water, and turmeric water were consumed by the villagers regularly for high immunity.

### **Discussion**

After interviewing the villagers, a fair amount of information was gathered about the Ho community, traditional healers, and the role of herbal medicines used by the Ho community members in combating Covid 19. Several traditional healers were contacted but most of them were reluctant and feared revealing the names of the herbs used by them for the cure of diseases. Pradeep Sinku from Toto, a government

school teacher, was well versed with the ingredients and methods of preparation of herbal medicines in order to strengthen immunity and safeguard oneself from cold, cough, and fever. Although not a traditional practitioner himself, he revealed that he remembered some home remedies offered to him during childhood by his grandparents and parents. The home remedies consisted of juice of tulsi, ginger, pipali, saunth, amla, turmeric, etc.

Mr. Gobardhan Mahto, Principal and Founder of Sitanath Mahto Vidya Mandir, Sonua agreed to help us and offered to accompany us in our fieldwork. We met Bhagwati Koda and Kashi Saw, two traditional healers who had several patients lined up near their shops. Both practitioners declared that they had never treated anyone suffering from Corona. Indrajit Kandiyani's shop was on the main road and his shop looked quite deserted. He agreed to spend time with us and respond to our queries. He informed us that he had studied up to the V<sup>th</sup> standard and then was a school dropout. He was the first traditional practitioner in his family. In the year 2000, he developed an interest in medicinal herbs. He spent 20 years as an apprentice to Kabiraj Lakshminarayan Bodra, a renowned traditional practitioner in the Sonua village. Indrajit shared that he has been able to win the trust of many villagers so far and all his patients have been successfully treated. He further revealed that he visited the forests in quiet afternoons to find herbs for preparing medicines. He was very particular about offering prayers to the Bandevi (Goddess of the forest) and Gram devta (protector of the village) before collecting herbs from the forests. On being questioned about the medicines used for curing corona patients, he said that he provided a very basic and effective cure. He prepared neem tea and lemon tea and recommended a mixture of tulsi leaves and ginger juice to patients suffering from a lung infection. He said that his methods benefitted many.

In Sonua, we interacted with the villagers and sometimes the village headmen. Most of them said that their area did not witness any death due to corona, but most of them hinted that the baidhya or Kabiraj in Sonua village, Lakshminarayan Bodra, was the best in the region and that he had trained many traditional practitioners in the region. Lakshminarayan Bodra's clinic was on the main road. It consisted of two enclosed spaces. The small space near the entrance was used for attending the patients and the inner enclosure was used as a store where all medicinal herbs--pills and powder were neatly stacked.

Lakshminarayan proudly shared that his ancestors were all renowned Kabiraj or Baidhya. His grandfather and father had become quite popular. Patients travelled all way from Orissa and Chhattisgarh for treatment. Their courtyard has served as a training school for many. Most of the traditional practitioners in the area came to Lakshminarayan's abode for training or consultation and advice. The initiation of a traditional practitioner is an auspicious event: 'The transferring of knowledge of a herb to an apprentice is a very sacred act. The date is first earmarked by a *Pahan*. The act occurs early in the morning. Both the teacher and the pupil observe a fast until the ritual of 'knowledge transfer' is over. Most of the knowledge transferred from generation to generation is in the oral form'. Traditional practitioners in the recent past have begun documenting their knowledge about medicinal herbs. Some of them even subscribed to and refer to journals published by institutions supporting the Ayurvedic System of healing.

### Urine Examination with Mustard Oil for Diagnosis

Lakshminarayan Botra and his disciples are quite renowned in the Sonua district of West Singhbhum. During our field visit we observed how patients began to trickle in from 8 AM. The patients carried their urine

samples. The traditional healers poured the urine sample into a clay bowl and added a few drops of mustard oil to the surface of the urine sample. References to this practice have been found in *Charaka sutrasthana*, an Ayurvedic text, where it has been referred to as *Tailabindu Pariksha*. Lakshminarayan Bodra, however, shared that his father had also used this ethnic lab testing method for diagnosis and prognosis.



Figure 1: Tailabindu Pariksha used by Traditional Practitioners of Sonua, West Singhbhum



Figure 2: Patients wait for Diagnosis and Prognosis

The patients never questioned the traditional practitioner and trusted him completely. The patients paid a meagre fee of Rs. 100 but the practitioner never demanded any money from them. They understand and firmly believe that charging extra money as a fee will bring adverse results. They believe that greed will result in the wrath of the ancestors, and they would be shorn of their healing powers.



Figure 3: Cottage Industry: Herbal Drinks and Tablets Prepared at Home

We walked down to Lakshminarayan's abode down the road. Around 9 young boys were busy pounding, crushing, boiling, and rolling the medicinal herbs. The traditional practitioner disclosed: 'We cannot use machines for the preparation of herbal medicines. The preparations are done manually, otherwise, the herbs will lose their efficacy.' Lakshminarayan Bothra ushered us into his tiny library in the far corner of the courtyard of his abode and proudly displayed before us the diaries in which his father had tediously enumerated the names of medicinal herbs, their characteristics, and the names of the diseases they cured.

Influence of Ayurveda in the healing methods of Traditional Practitioners of Sonua, West Singhbhum

Various volumes written by Vaidya, Ayurvedic Practitioner; Gopinath Parekh titled: *Van Aushadhi* were neatly stacked in the library. Kabiraj shared: 'I sometimes use these books for cross-referencing... But my ancestor's knowledge system is matchless and immense.' Thursdays, it is believed, are Van Devi's birthday. It is a day off for traditional practitioners. After a bath, they assemble early in the morning on the outskirts of the forest and offer prayers to the Van Devi and the Gram Devta before they step into the forest for the collection of medicinal herbs. They very carefully gather the herbs, taking special care of not injuring the trees. Apart from Thursdays, all other days are very hectic for Lakshminarayan and his mates.

The traditional practitioners adhere to the traditional knowledge inherited but were often seen referring to Ayurvedic texts. If traditional knowledge is not documented soon, it will all be lost and the documented knowledge will gain precedence.

### Medicinal Herbs Used During Covid 19

The traditional practitioners shared that Lakshminarayan's father had successfully treated patients infected by the coronavirus. His medicine had become very popular. He prepared pills with a mixture of Agnimantha or *Clerodendrum Phlomidis*, Vidhara or *Argyreia Nervosa*, Semal or *Bombax Ceiba* Dalchini or *Cinnamomum Zeylanicum*, Cardamom or *Elettaria Cardamomum* and Simjenga or *Rauvolfia Serpentina* and filtered urine of a black cow. Lakshminarayan shared how the villages had become alert and kept a watchful eye for covid 19 symptoms: 'The moment a person complained of cough, I gave them a mixture of Pipri or *Piper longum*, Kushmanda or *Cucurbita Pepo* Cardamom or *Elettaria Cardamomum*, cinnamon or *Cinnamomum Zeylanicum* and milk of simjenga or *Rauvolfia Serpentina*. The results were miraculous. For fever, I recommended herbal tea prepared by boiling Punarwa or *Boerhavia diffusa* and Pipri or *Piper longum*. Mahua flower or *Madhuca longifolia* and its oil seeds proved highly beneficial for checking cough and respiratory issues. Ada or *Zingiber Officinalis* was boiled in water and consumed for curing respiratory trouble, cough, and cold. The root, bark, leaves, and flowers of Baikash or *Adhatoda Vasica* were used in the form of powder for respiratory trouble. Ashwagandha was extensively used during Covid 19. The root powder was commonly consumed with water or honey. Juice of the leaves of the Malabar Nut shrub provides relief from respiratory tract infection, cough, and cold.

### Aspirations of Traditional Practitioners

Traditional practitioners are happy and satisfied lot. They desire to reach out to more people and cure their illnesses. They



do not mind prescribing herbal medicines to those undergoing allopathy treatment: 'Traditional medicines prescribed by us are 100 percent natural and have no side effects. They can easily be consumed with allopathy medicine.' The healers harbor the secret desire of going out to the Saranda

forests and collecting the precious 'safed belwa' which will fetch them a handsome amount. Each seed of safed belwa was worth Rs 10 Lakh because of its high medicinal value. It is believed to be so hot that it is capable of setting camphor ablaze.

### Details of Medicinal Herbs Used by Ho Community of West Singhbhum During Covid 19

**Table 1- Medicinal Plants Used to Combat Coronavirus Infections during Covid 19 by the Traditional Practitioners of West Singhbhum**

English Name	Local Name	Scientific Name	Parts	Uses
Agnimantha	Agnijaya	<i>Clerodendrum Phlomidis</i>	Roots, leaves	Fever
Vidhara	Vrihadaru	<i>Argyrea Nervosa</i>	Root powder	Immunity booster, a rich source of Vitamin C
Semal (silent doctor)	Semal	<i>Bombax Ceiba</i>	Flower	Cold and cough
Cinnamon	Dalchini	<i>Cinnamomum Zeylanicum</i>	Bark	For respiratory and digestive ailments
Cardamom	Elaichi	<i>Elettaria Cardamomum</i>	Fruit	Asthma and cough
Serpentine wood	Simjenga	<i>Rauvolfia Serpentina</i>	Flower	Respiratory tract infection
Long Pepper	Pipri	<i>Piper longum</i>	Fruit	Respiratory and gastrointestinal infection
Winter Melon	Kushmanda	<i>Benincasa Hispida</i>	Fruit, seeds	Fever and cough
Hogweed	Punarwa	<i>Boerhavia diffusa</i>	Leaves	Cold and cough
Buttercup	Mahua	<i>Madhuca longifolia</i>	Flower, oilseed	Cold, cough, bronchitis
Malabar Nut	Baikash	<i>Adhatoda Vasica</i>	Leaves	Cough, asthma, fever
Ginger	Ada	<i>Zingiber Officinalis</i>	Rhizome	Therapeutic
Holy Basil	Tulsi	<i>Ocimum tenuiflorum</i>	Leaves	Cold, cough

Heart Leaved Moonseed	Guduchi	<i>Tinospora cordifolia</i>	All Parts	Immunity booster
False Pepper	Vayvidanga	<i>Embelin ribes</i>	Seeds	Respiratory tract infection
Malabar Nut	Adusa, Vasaka	<i>Justicia adhatoda</i>	leaves, roots, flowers, and bark	Cough, asthma, fever
Indian Winter cherry	Ashwagandha	<i>Withania somnifera</i>	Roots, fruit, leaves	Asthma, cough

### Scientific Evidence Authenticating the Efficacy of Herbal Medicines Used by Traditional Practitioners

A literature review of the databases available ratifies the potency and virtue of the medicinal herbs used by the traditional practitioners in West Singhbhum during Covid-19. Nesari TM, Bhardwaj A, ShriKrishna R, Ruknuddin G, Ghildiyal S, Das A, Pandey AK, Chaudhary N, Soman G, Barde et.al in a research paper titled *Neem (Azadirachta Indica A. Juss) Capsules for Prophylaxis of COVID-19 Infection: A Pilot, Double-Blind, Randomized Controlled Trial* revealed that there was a reduced risk of COVID-19 infection in participants receiving neem capsules, which demonstrates its potential as a prophylactic treatment for the prevention of COVID-19 infection<sup>5</sup>.

A couple of papers were found during a literature review on the topic which determined the antiviral effects of neem plants and their successful use during COVID-19. Studies conducted by Pieroni A, Vandebroek I, Prakofjewa J, Bussmann RW, Paniagua-Zambrana NY, Maroyi A, Torri L, Zocchi DM, Dam ATK, Khan SM, Ahmad H, Yeşil Y, Huish R, Pardo-de-Santayana M, Mocan A, Hu X, Boscolo O, Sōukand R in the paper titled *Taming the pandemic? The importance of homemade plant-based foods and beverages as community responses to COVID-19* revealed that: 'The most remarkable shift in many areas has been the increased consumption of ginger and garlic, followed by onion, turmeric, and lemon<sup>6</sup>.

Studies carried out by Abdullah Jafarzadeh, Sara Jafarzadeh, and Maryam Nemati were published in a paper titled *Therapeutic potential of ginger with COVID-19: Is there enough evidence?* which confirmed the preventive and therapeutic potential of ginger in SARS-CoV-2-infected patients using ginger or ginger + anti-virus treatments. It was reported that ginger supplements significantly reduced the length of hospital stay in individuals with COVID-19<sup>7</sup>.

Traditional practitioners reveal that Tulasi is hot in potency, drying in nature, and is used in cough, asthma, and digestive disorders. It is used in bronchitis. A decoction of Tulasi roots is prescribed for malarial fever. Marc Maurice Cohen from Australia, in his paper titled *Tulsi - Ocimum sanctum: A herb for all reasons* admitted that *Tulsi* had immense anti-microbial activity<sup>8</sup>.

*Clerodendrum phlomidis* is a large shrub or small tree, reaching a height of 30 feet. It is hot in potency and stimulates digestive capacity. In rheumatic fever and intermittent fever, it is used with pepper and zingiber by traditional practitioners. A decoction of its roots, paste, and juice of its leaves is often used by traditional practitioners for the cure of various ailments. Herbal Drug Technology Laboratory, Pharmacy Department published a paper titled *Comprehensive review of Clerodendrum phlomidis: a traditionally used bitter* in which the anti-asthmatic, antifungal qualities of

Clerodendrum Phlomidis have been affirmed<sup>9</sup>.

Lakshminarayan Bodra, the traditional practitioner of West Singhbhum shared the mythological genesis of *Tinospora cordifolia* (Giloy): 'It is believed that Lord Indra was greatly pleased by the victory of Rama over Ravana. During the celebration, he sprinkled nectar on all wounded and dead soldiers to heal them and bring them back to life.'

The plant of *Tinospora cordifolia* grew in all those places where the heavenly nectar fell. It is a large succulent climber with rough corky bark, found throughout India. Its roots stem, and starch is used in preparing medicines. It is best consumed fresh for efficacy according to traditional practitioners. A study conducted by scholars from India Australia and Korea namely Kumar P, Kamle M, Mahato DK, Bora H, Sharma B, Rasane P, and Bajpai Vk has acknowledged the efficacy of Heart Leaved Moonseed in their paper *Tinospora cordifolia* (Giloy): *Phytochemistry, Ethnopharmacology, Clinical Application, and Conservation Strategies*. The scholars declared that *Tinospora cordifolia* (Giloy) is a medicinal plant and is immensely useful due to the presence of different compounds of pharmaceutical importance and possess pharmacological properties, which make them antidiabetic, antipyretic, anti-inflammatory, antioxidant, hepatoprotective, and immuno-modulatory<sup>10</sup>.

*Embelin ribes* are found in the forests of Saranda and are used by traditional practitioners to cure respiratory issues. Studies conducted by researchers from Malaysia, Bangladesh, and Russia namely, Hossan MS, Fatima A, Rahmatullah M, Khoo TJ, Nissapatorn V, Galochkina AV, Slita AV, Shtro AA, Nikolaeva Y, Zarubaev VV, Wiart C affirm the antiviral properties of *Embelin ribes* in their paper titled *Antiviral activity of Embelia ribes Burm. f. against influenza virus in vitro*<sup>11</sup>.

*Adhatoda Vasica* is an evergreen, stiff, perennial shrub that usually grows on

wastelands. Several alkaloids are present in the plant. The traditional practitioners shared that a kadha prepared by boiling its leaves is useful in cough, bronchial asthma, and fever. However, it needs to be consumed under supervision because an excess intake may lead to complications. Studies carried out by Singh B, Sahu PM, Aloria M, Reddy SS, Prasad J, Sharma RA, researchers from Rajasthan and Andhra Pradesh in a paper titled: *Azotobacter chroococcum and Pseudomonas putida enhance pyrroloquinazoline alkaloids accumulation in Adhatoda vasica hairy roots by biotization* affirmed: '*Adhatoda vasica* is used in the treatment of cold, cough, chronic bronchitis, asthma, diarrhea, and dysentery<sup>12</sup>.

The cultivated plants of *Ashvagandha* are different from the ones that are found in the forests not only morphologically but also in their medicinal power. The presence of alkaloids makes it a relaxant, an effective cure for asthma and cough. The traditional healers warned that since *ashwagandha* is a depressant, hypnotic and diuretic, care should be taken while consuming it. Studies carried out by Shree P, Mishra P, Selvaraj C, Singh SK, Chaube R, Garg N, and Tripathi YB, from Varanasi and Tamil Nadu in their paper *Targeting COVID-19 (SARS-CoV-2) main protease through active phytochemicals of ayurvedic medicinal plants - Withania somnifera (Ashwagandha), Tinospora cordifolia (Giloy) and Ocimum sanctum (Tulsi) - a molecular docking study* concluded that *Ashwagandha*, *Giloy*, and *Tulsi* can be safely used for the treatment of respiratory tract infections.<sup>13</sup>

*Argyreia Nervosa* is a very large stout climber, often cultivated for its large purple flowers. The stem, roots, and leaves of this plant are known to possess medicinal powers. Traditional practitioners mix equal amounts of the powder of *ashwagandha* and *vidhara* for good results. Simon Gibbons and Warunya Arunotayanun in their paper concluded that *Argyreia Nervosa* is an

immunomodulatory and a rich source of Vitamin C<sup>14</sup>.

A Review Article titled *A Pharmacognostic and pharmacological overview of Bombax ceiba* recommended the use of semal for the cure of Cold and cough. They prescribed a mixture of semal root powder with black pepper and dry ginger powder for the same<sup>15</sup>.

Cinnamomum is an evergreen aromatic tree that grows wild in some areas and is cultivated in others. The chemical constituents include diterpenes, and glycosides and are known to possess anti-allergic and antiviral properties. Ranasinghe P, Piger S, Premakumara GA, Galappaththy P, Constantine GR, Katulanda P, Srilankan researchers in their paper *Medicinal properties of 'true' cinnamon (Cinnamomum zeylanicum): a systematic review* declared that cinnamon is a remedy for respiratory and digestive ailments<sup>16</sup>.

*Elettaria cardamom* is a tall herbaceous perennial, native to evergreen forests. It stimulates digestive capacity and is diuretic, carminative, stimulant, and aromatic. Traditional practitioners use it for bronchial asthma and cough. In a critical review published in the *Journal of Ethnopharmacology*, researchers from Canada and Kerala in their paper *Botany, traditional uses, phytochemistry, and biological activities of cardamom [Elettaria cardamomum (L.) Maton]* - shared that cardamom is effective for the control of asthma<sup>17</sup>.

The traditional practitioner of Sonua informed that *Sarpagandha* or *Rauwolfia Serpentina* is a bitter tonic, hypotensive, tranquilizing, and is widely used by the traditional practitioner in case of fever. In chronic fever, it is administered with pepper, vaca, Dikemali, Chiraiyeta, and Bidalavana. Dr. Kamat further shared that there was a great interest in this drug—the alkaloid reserpine was a very popular drug for hypertension. Researchers from Tufts and Boston, Maurice S. Segal, and Ernst O.

Attinger in their paper titled *The Use of Reserpine ( Rauwolfia serpentina) as an Adjunct in the Management of Patients with Chronic Bronchial Asthma and Chronic Pulmonary Emphysema: Preliminary Studies* affirmed the effectiveness of *Rauwolfia Serpentina* in the treatment of bronchial and pulmonary related issues<sup>18</sup>. Researchers from Korea have acknowledged in their paper titled *Water Extract of Piper longum Linn Ameliorates Ovariectomy-Induced Bone Loss by Inhibiting Osteoclast Differentiation* that *Piper longum* has traditionally been used for the treatment of respiratory and gastrointestinal disorders in India<sup>19</sup>.

In a paper published in *Oxidative Medicine and Cellular Longevity*, titled *A Literature-Based Update on Benincasa hispida (Thunb.) Cogn.: Traditional Uses, Nutraceutical, and Phytopharmacological Profiles* researchers Islam MT, Quispe C, El-Kersh DM, Shill MC, Bhardwaj K, Bhardwaj P, Sharifi-Rad J, Martorell M, Hossain R, Al-Harrasi A, Al-Rawahi A, Butnariu M, Rotariu LS, Suleria HAR, Taheri Y, Docea AO, Calina D, Cho WC, have acknowledged the use of *Benincasa hispida* for the cure of fever and cough accompanied by thick mucus<sup>20</sup>.

*Boerhavia diffusa* is a perennial herb found throughout India. Traditional practitioners recommend a mixture of Kutaki, chiretta, and zingiber for disorders like cough and cold. When prescribed with Vaca and Zingiber, it causes the removal of excessive cough by emesis. In a paper titled *Phytochemical, therapeutic, and ethnopharmacological overview of a traditionally important herb: Boerhavia diffusa Linn*, Faculty of Pharmacy, Jamia Hamdard, Hamdard Nagar, scholars from Pharmacy College, Muradnagar, National Institute of Pharmaceutical Education & Research, Punjab, namely Mishra S, Aeri V, Gaur PK, Jachak SM, have recognized the significant role of *Boerhavia diffusa* in the treatment of respiratory tract infection<sup>21</sup>.

*Madhuca longifolia* is a medium to a large-sized deciduous tree found throughout the country. It is rich in Vitamin A and Vitamin C. Mahua flowers are used in cough, cold, and bronchitis. The milky latex obtained from the bark is used by traditional practitioners for the cure of tonsillitis. Ramadan MF, Mohdaly AA, Assiri AM, Tadros M, Niemeyer B, researchers from Egypt, Saudi Arabia, and Germany in their paper *Functional characteristics, nutritional value, and industrial applications of Madhuca longifolia seeds: an overview* affirmed the effective use of *Maduca longifolia* in the treatment of respiratory infections<sup>22</sup>.

Most of the studies carried out by researchers point out the appropriateness of the medicinal herbs used by traditional practitioners of the Ho Community of West Singhbhum. The traditional knowledge gifted to them by their ancestors has endowed them with life-saving skills and the knowledge system if studied without prejudice appears to have a sound scientific base.

Our survey showed significant retention of traditional knowledge of medicinal plants in West Singhbhum. But the influence of Ayurvedic texts was also high. The Literature review corroborated that the plants used by traditional practitioners have high medicinal value. More clinical trials should be repeated locally to establish the safety and efficacy of the medicinal herbs used and to dispel the notions of those who refer to the treatment offered by traditional practitioners as mere quackery.

The community members appeared confident of their knowledge of medicinal herbs and said they were prepared for any new wave of viral infections. They were reluctant to give away all the knowledge they possessed.

### **Laws, Activists, Medical Practitioners, and Community Members**

Some activists have familiarised the community members with the concept of

Intellectual Property Rights and forbid them from sharing details. Community members are made to understand that everything comes at a price therefore, traditional practitioners demand a regional framework to recognize, protect, and promote the traditional methods of healing used by the practitioners. They demand inclusion in the Ayush Department, an initiative by the Government of India.

The Biodiversity Act 2002 recognizes the rights of communities in developing traditional knowledge related to biological resources. It is different from Intellectual Property Rights as it provides for equitable sharing of benefits arising out of commercial activities or any other use and knowledge of biological resources related to traditional knowledge. *Guidelines for Examination in the European Patent Office, Part C, Chap. IV, at 2.3*) states that a substance found freely in nature is unpatentable. If a substance found in nature is isolated from its surroundings and processed, then the method used for processing is patentable. Hence patenting herbs is not possible but the methods used for the preparation of medicines from medicinal herbs can be documented, protected, and patented.

The 9<sup>th</sup> World Ayurveda Congress & Arogya Expo 2022 was organized in Goa between the 8<sup>th</sup> to 11<sup>th</sup> of December 2022. The conference was organized with the chief objective of providing global platforms for all stakeholders including traditional practitioners and herbal medicine growers. In a prebudget seminar organized in Ranchi, Jharkhand, a petition to allocate funds for the promotion of herbal medicines in the state was formulated and submitted to the State Government. Results are being awaited.

Medical specialists have their own standpoints. Dr Siddharth Dikshit, Consultant Ophthalmologist at LV Prasad Eye Institute, Hyderabad, shared: 'There is no doubt that these herbs contain

pharmaceutical molecules. But we need to know the details, the adverse effects. Like quinine from cinchona tree bark is both life-saving and poison—depending on its processing and administered quantity. These questions need to be answered before any herb makes its way into the market.’ Dr. Kumar Shantanu Anand, an Orthopaedic surgeon in Purnea, Bihar, looked perturbed by the very thought of bringing traditional practitioners into mainstream medical practice: ‘Do not glorify the traditional practitioners. We need more facts and more scientific data. The immunity level of the tribal community members is already high. Their traditional knowledge will serve them better. But not for the urban population... we need randomized, double-blind study reports.’ The Ministry of Ayush has identified medicinal herbs as one of the key ingredients in its mission to propagate Ayush services in India and the traditional practitioners wait with bated breath for their inclusion. There is an urgent need to promote and invigorate integrative medicine, instill respect for the knowledge system possessed by traditional practitioners, and bridge the gap between doctors and traditional practitioners.

Acceptance of traditional practitioners in the urban space and permitting them to administer their dose of herbal medicines can benefit many. Dr. Neha Pathak from Delhi shared during a telephonic interview: ‘Antibiotics do not work well in case of cold, cough, fever, viral infection these days. The medicinal herbs, in fact, are more effective in these cases...’

### **Conclusion**

The traditional knowledge possessed by the traditional practitioners, though undocumented, is still in the oral form, is precise, and has a scientific base. Laboratory analysis has found that nearly all the medicinal herbs used by traditional practitioners register biological activity. The use of ethnobotanical information has seen an all-time high but the

acknowledgment for its propagators is yet to come. The focus should now rest on making these medicines available to a larger section of society. This can be achieved by respecting the traditional knowledge possessed by traditional practitioners, documenting their invaluable knowledge before it is lost, and creating a respectable space for them in the mainstream. The inclusion of the indigenous traditional knowledge system in AYUSH will not only be rewarding for traditional practitioners but also showcase symmetry in power.

### **Limitation and Precautions**

There exists an acute shortage of appropriate scientific evidence to prove and support the safety and efficacy of herbal medicines used by traditional practitioners. Blind belief in herbal medicines may expose patients to harm, and it is required that the herbs be prescribed judiciously. Herbal medicines may exacerbate existing health inequalities, as certain populations may have limited access to these forms of treatments due to factors such as availability or cost. Herbal medicines for various treatments should be regulated and quality-controlled to ensure that they meet appropriate safety standards.

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### **Conflict of Interest**

It is certified that the authors do not have any conflict of interest with respect to the

publication of this manuscript and have approved the final manuscript.

### Author(s) Contribution

Dr. Pragya Shukla designed the study and drafted the manuscript. Sudhir Kumar edited the manuscript. Nishant Nirvana helped with the ethnographic documentation.

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