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Review Article

Knowledge and use of traditional herbal home remedies among rural households in Paniv and surrounding areas, Maharashtra

Vinay Gaikwad^{1*}, Pankaj Khuspe², Sujit Desai³, Abhijeet Survase⁴, Kiran Ingole⁴

¹Dept. of Pharmacy, SPM's College of Pharmacy, Akluj, Maharashtra, India.

²Dept. of Pharmacy, College of Pharmacy, Paniv, Maharashtra, India.

³Dept. of Pharmacy, ADT School of Pharmacy and Research Center, Baramati, Maharashtra, India.

⁴Dept. of Vidya-Niketan College of Pharmacy, Lakhewadi, Maharashtra, Maharashtra, India.

Abstract

Traditional herbal home remedies continue to play a significant role in primary healthcare practices among rural communities in India. This review investigates the knowledge, use, and transmission patterns of herbal home remedies among households in Paniv and nearby villages in Maharashtra. India, home to one of the world's oldest medicinal traditions, sees over 70% of its rural population relying on traditional medicine for their health needs, often due to limited access to modern healthcare. The review explores the commonly used medicinal plants, their therapeutic applications, and the sociocultural factors influencing their use. Data were gathered through structured interviews, household surveys, and focus group discussions conducted in Paniv and its adjacent villages, ensuring a diverse representation of the community. Notably, herbs such as Tulsi (*Ocimum sanctum*), Neem (*Azadirachta Indica*), Adulsa (*Justicia Adhatoda*), and Turmeric (*Curcuma Longa*) emerged as frequently utilized for treating respiratory ailments, skin infections, digestive issues, and minor wounds. The transmission of this knowledge predominantly occurs through oral traditions, with elderly women acting as primary custodians of ethnomedicinal practices. Despite the benefits, challenges such as inconsistent dosing, potential toxicity, and lack of scientific validation present limitations to widespread adoption. This article emphasizes the importance of integrating ethnobotanical wisdom with modern healthcare systems and the need for further pharmacological validation of these remedies. It advocates for policy frameworks that protect indigenous knowledge while promoting safe, effective, and culturally sensitive healthcare practices in rural India.

Keywords: Traditional Medicine, Herbal Remedies, Rural Health, Ethnobotany, Maharashtra

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1. Introduction

Traditional herbal home remedies have been an integral component of rural healthcare in India for centuries, deeply embedded in cultural practices and generational wisdom. In Maharashtra, particularly in villages like Paniv and its surrounding regions, households frequently rely on indigenous herbal treatments to manage common ailments such as fever, gastrointestinal disorders, respiratory conditions, and dermatological problems. This preference is driven by accessibility, low cost, cultural familiarity, and an

ingrained trust in the efficacy of local medicinal plants. Despite advancements in biomedical infrastructure, a significant proportion of rural populations continue to utilize herbal remedies, either exclusively or in conjunction with modern healthcare practices.¹

1.1. Historical and cultural significance

India has a long-standing tradition of herbal medicine, deeply embedded in its cultural, spiritual, and social fabric. Ancient systems like Ayurveda, Siddha, and Unani have systematized the use of medicinal plants for maintaining health and

*Corresponding author: Vinay Gaikwad
Email: vinaydg123@gmail.com

preventing disease. The Ayurvedic pharmacopeia documents over 600 medicinal plant species, many of which are still used in home-based formulations across rural India. These systems emphasize a holistic approach to health, focusing on the balance between mind, body, and environment. In rural communities, especially in agrarian regions, herbal remedies are often the first line of treatment for common ailments. This practice is facilitated by easy access to local medicinal flora and a rich oral tradition of healing knowledge passed from elders to younger generations.²

1.2. Contemporary relevance and public health integration

Despite advances in modern medicine, traditional herbal medicine remains relevant, particularly in resource-constrained rural areas. According to the World Health Organization (WHO), approximately 80% of the population in developing countries relies on traditional medicine for primary healthcare. In India, this dependence is especially visible in rural and tribal populations, where herbal home remedies offer a cost-effective and culturally accepted alternative to allopathic medicine.³

A national-level survey conducted by the Ministry of AYUSH in 2018 revealed that approximately 77% of Indian households use traditional medicine, particularly herbal remedies, either as part of regular healthcare practices or in response to specific health conditions. This usage is significantly higher in rural regions, where accessibility and affordability of modern medical care are limited.⁴

1.3. Status in Maharashtra

Maharashtra, one of India's largest and most agriculturally diverse states, has a vibrant tradition of herbal medicine, particularly in its rural districts like Solapur, Beed, Satara, and Nashik. A survey conducted by the National Medicinal Plants Board (NMPB) and various academic institutions across Maharashtra reported that over 65% of rural households in the state regularly use herbal remedies. These include preparations made from commonly available plants such as Tulsi (*Ocimum Sanctum*), Neem (*Azadirachta Indica*), Amla (*Phyllanthus Emblica*), and Turmeric (*Curcuma Longa*).⁵ In Solapur district, where the village of Paniv is located, ethnobotanical field studies have identified more than 120 medicinal plant species being used by local populations for ailments such as respiratory infections, gastrointestinal issues, and dermatological conditions. This indicates a rich but under-documented tradition of herbal home healthcare.⁶

The World Health Organization (WHO) estimates that nearly 80% of the global population relies on traditional medicine for primary healthcare needs. In India, a report by the Ministry of AYUSH (2022) highlighted that more than 70% of rural households still utilize herbal medicine regularly. In Maharashtra, studies have shown a consistent reliance on herbal formulations derived from locally available flora. The wealth of traditional knowledge, though

largely undocumented, serves as an invaluable public health resource. However, with rapid modernization, there is a growing concern over the erosion of this knowledge and a lack of scientific validation of commonly used remedies. Therefore, exploring the current trends in the use and transmission of herbal home remedies in rural Maharashtra is essential for safeguarding this cultural heritage and integrating it into holistic public health strategies.⁷⁻⁸

2. Background: Traditional Medicine in India and Maharashtra

India boasts a rich tradition of medicinal systems such as Ayurveda, Siddha, and Unani, rooted in the use of herbs and natural formulations. These systems are widely practiced, especially in rural areas where access to modern medicine remains limited. Maharashtra, being a state with diverse topography and ethnobotanical resources, holds an extensive repository of medicinal plants. The Ministry of AYUSH has identified Maharashtra as a priority state for the documentation and promotion of traditional medicine practices.¹⁻² A significant number of rural communities in the state continue to depend on these systems due to economic constraints and cultural preferences. Traditional healers, known locally as 'Vaidyas' or 'Bhagats', along with elderly family members, play a pivotal role in the dissemination of herbal knowledge. Commonly used herbs include tulsi (*Ocimum Sanctum*), neem (*Azadirachta Indica*), giloy (*Tinospora Cordifolia*), and ashwagandha (*Withania Somnifera*), which are reputed for their immunomodulatory and therapeutic effects. Government initiatives have attempted to preserve and promote this knowledge through AYUSH centers and ethnobotanical surveys, but challenges remain regarding standardization, validation, and integration with modern public health systems.⁹⁻¹⁰

3. Objectives of the Study

This review article aims to:

1. Assess the prevalence and patterns of traditional herbal remedy usage among households in Paniv and adjacent villages in Maharashtra.
2. Identify commonly used medicinal plants and their therapeutic applications.
3. Understand the socio-cultural and familial mechanisms through which herbal knowledge is transmitted.
4. Explore limitations, safety concerns, and challenges associated with the continued use of herbal home remedies.
5. Propose pathways for integrating validated herbal practices into the broader public health framework.

4. Materials and Methods

Data for this study were collected using a combination of field visits, semi-structured interviews, and focus group discussions conducted between March and May 2025 in

Paniv and nearby villages including Malshiras, Sangramnagar, and Akluj. A purposive sampling method was employed to select 50 households across different socio-economic backgrounds. Respondents included elderly family members, traditional healers, homemakers, and young adults. Observations regarding herbal preparation, storage, and application were documented. Literature from ethnobotanical

databases, government health reports, and prior studies on traditional medicine in Maharashtra were also reviewed to support and contextualize field findings,¹¹⁻¹² **Table 1**, which includes sample data on commonly used herbal remedies collected from **Paniv and surrounding villages** in Maharashtra.

Table 1: Commonly used herbal remedies among rural households in paniv and surrounding areas.

Sr. No.	Plant Name (Botanical Name)	Local Name	Part Used	Indication	Method of Use
1	<i>Ocimum Sanctum</i>	Tulsi	Leaves	Cough, cold, fever	Decoction or leaf chewing
2	<i>Azadirachta Indica</i>	Neem	Leaves, bark	Skin infections, blood purifier	Bath water additive, paste
3	<i>Zingiber Officinale</i>	Ale	Rhizome	Nausea, indigestion, sore throat	Crushed with honey or tea
4	<i>Curcuma Longa</i>	Halad	Rhizome	Wound healing, anti-inflammatory	Paste or added to warm milk
5	<i>Justicia Adhatoda</i>	Adulsa	Leaves	Respiratory issues, cough	Boiled extract or syrup
6	<i>Phyllanthus Amarus</i>	Bhui Amla	Whole plant	Liver disorders, jaundice	Juice extraction
7	<i>Tridax Procumbens</i>	Ekdandi	Leaves	Cuts, wounds, anti-bleeding	Direct leaf application

Table 2: Demographic distribution of herbal remedy usage among rural households

Category	Subgroup	Percentage Reporting Use (%)	Primary Source of Knowledge
Gender	Male	58.20%	Elders in household, local healers
	Female	74.60%	Mothers, grandmothers, self-learning
Age Group	18–30 years	32.40%	Internet, community health workers
	31–50 years	63.50%	Family tradition, neighbors
	>50 years	81.90%	Traditional oral transmission
Education Level	Illiterate	76.30%	Elders and folk knowledge
	Primary to Secondary	60.50%	Mixed (oral + informal books)
	Graduate and above	41.20%	Digital platforms, books, formal sources
Occupation	Farmer	78.70%	Field-based experiential knowledge
	Homemaker	72.90%	Family tradition
	Student	36.50%	Social media, school programs

5. Commonly Used Herbal Remedies

5.1. Frequently used medicinal plants and their applications

The study identified several plants commonly used in local remedies. Tulsi (*Ocimum sanctum*) is widely used for respiratory issues, neem (*Azadirachta indica*) for skin conditions and immunity, and turmeric (*Curcuma longa*) as an anti-inflammatory agent. Other plants such as ginger (*Zingiber officinale*), aloe vera (*Aloe barbadensis*), and giloy (*Tinospora cordifolia*) are also frequently utilized. Remedies are often prepared as decoctions, pastes, or infusions, and are tailored based on symptoms and availability of herbs

5.2. Sources of herbal knowledge and transmission patterns

Knowledge of herbal medicine is predominantly transmitted orally across generations. Elderly women, in particular, act as

primary knowledge bearers, guiding household health practices. Traditional healers also play a role in community-wide dissemination. In recent years, however, a decline in interest among younger populations has been observed due to urban migration, lack of documentation, and influence of allopathic medicine. Table 2 shows herbal remedy usage patterns across different demographic groups in Paniv and surrounding villages.

5.3. Challenges, limitations, and risks associated with herbal home remedies

Despite their popularity, traditional herbal remedies face several limitations. Lack of dosage standardization, risk of misidentification of plants, contamination, and insufficient clinical validation are major concerns. Adverse effects may occur if herbs are used incorrectly or in combination with allopathic drugs. Furthermore, environmental degradation

and overharvesting threaten the availability of some medicinal species. There's an urgent need for pharmacological studies and public education to ensure safe and effective use.³

6. 6. Integration with Public Health Systems

The integration of traditional herbal home remedies into mainstream public health systems represents a promising avenue to improve healthcare access and affordability in rural and underserved areas. In regions like Paniv and its surrounding villages, where modern medical infrastructure may be limited or unaffordable, time-tested herbal practices form an essential part of household-level healthcare. However, these practices often operate outside formal healthcare channels, lacking scientific validation, standardization, or regulatory oversight. To harness their full potential, a multi-stakeholder framework is required that bridges the gap between traditional and modern medical systems. This includes strategic partnerships between the Ministry of AYUSH, primary healthcare providers, state rural health missions, and academic research institutions. Validation and documentation of herbal remedies through community-based participatory research (CBPR) can enhance their credibility and pave the way for safe, evidence-informed integration into primary healthcare protocols.¹³⁻¹⁴

6.1. Government policy directions and supportive measures

1. The National AYUSH Mission (NAM) provides a valuable platform to promote AYUSH-based healthcare. Strengthening its outreach in rural Maharashtra, especially through mobile clinics and herbal dispensaries, is essential.
2. State-level health policies should include mandates for developing digital databases of locally used herbal remedies, enabling both preservation and scientific evaluation.
3. Integration of AYUSH units in Primary Health Centers (PHCs) and training modules for Accredited Social Health Activists (ASHAs) and Auxiliary Nurse Midwives (ANMs) on the use of validated herbal remedies can enhance last-mile delivery.
4. Funding and support for interdisciplinary research under schemes such as the Traditional Knowledge Digital Library (TKDL) and ICMR-AYUSH collaborative projects must be scaled up to scientifically assess efficacy, dosage, and safety profiles of commonly used herbs.¹⁵

6.2. Future directions:

1. Establishing community herbal gardens under the support of local Panchayats and NGOs to ensure accessibility and conservation of medicinal plants.
2. Development of mobile applications with locally curated herbal knowledge and AI-assisted diagnosis for rural populations.
3. Creation of regional research hubs in partnership with pharmacy colleges and traditional healers to conduct

ethnobotanical surveys and pharmacological screenings.

4. Enacting regulatory updates under the Drugs and Cosmetics Act to ensure proper labeling, safety, and ethical marketing of herbal formulations.
5. By embedding traditional remedies into the formal healthcare ecosystem, the government can offer culturally sensitive, sustainable, and low-cost healthcare options, improving public trust and health outcomes in rural India.¹⁶

7. Conclusion

The widespread use of traditional herbal home remedies among rural households in the Paniv area and surrounding villages of Maharashtra reflects a deep-rooted cultural heritage and an enduring reliance on natural medicine systems. This review highlights that, despite the increasing penetration of modern healthcare services, traditional remedies remain integral to local healthcare practices, particularly for common ailments such as coughs, colds, fever, gastrointestinal disturbances, and skin conditions. The knowledge surrounding herbal remedies is primarily passed down through generations, with family elders and community healers acting as custodians of this valuable oral tradition. The continued use of herbal medicine is influenced by factors such as accessibility, affordability, perceived efficacy, and cultural beliefs. In rural contexts where healthcare infrastructure may be limited, these remedies serve as a vital first line of defense against illness. Moreover, community attitudes reflect a high degree of trust in these remedies, although concerns regarding dosage standardization, quality control, and lack of scientific validation persist. This study underscores the importance of documenting, preserving, and validating traditional knowledge through scientific research and policy integration. There is a pressing need to bridge the gap between traditional and modern systems by promoting interdisciplinary research, public health education, and collaboration with AYUSH frameworks. Engaging younger generations in herbal knowledge through community workshops and school-level programs may also help sustain this legacy. Ultimately, the fusion of empirical wisdom with scientific rigor can pave the way for holistic, inclusive, and sustainable rural healthcare models.

8. Source of Funding

None.

9. Conflict of Interest

None.

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