

Traditional Herbal Practices and Disease Treatment Patterns in Central Rajasthan: A Medical Geographical Study

Dr. Snehlata¹, Dr. Mukesh Kumar Sharma², Dr. Babita³

¹ Assistant Professor, Department of Geography, Maharani Girls PG College, Rampura, Alsisar, Jhunjhunu, Rajasthan

² Assistant Professor, Department of Geography, S.S. Jain Subodh PG College, Jaipur, Rajasthan

³ Assistant Professor, Department of Geography, S.K.D. University, Hanumangarh, Rajasthan

Abstract: Traditional herbal medicine has been an integral part of healthcare practices in Rajasthan for centuries, particularly in rural and semi-arid regions where modern medical infrastructure remains limited. Central Rajasthan—including Ajmer, Nagaur, Tonk, and parts of Jaipur—retains a strong tradition of indigenous medicinal knowledge rooted in local ecology, cultural practices, and community-based healers. This study explores the spatial distribution of traditional herbal practitioners, the medicinal plants commonly used, and the patterns of disease treatment within rural communities. Using medical geographical techniques, field surveys, ethnobotanical documentation, and GIS mapping, the research identifies distinct zones where traditional herbal practices continue to be dominant. Results reveal that respiratory ailments, gastrointestinal disorders, skin diseases, musculoskeletal pain, and reproductive health issues are the primary categories treated using herbal remedies. The study shows that ecological diversity, caste-based knowledge systems, and accessibility barriers to modern healthcare significantly shape treatment patterns. The research concludes that traditional herbal practices are not only culturally significant but also economically viable and ecologically adapted systems of primary healthcare in central Rajasthan. It recommends integrating ethnomedicinal knowledge into local health planning, conserving medicinal plant habitats, and strengthening community healthcare models.

Keywords: Ethnomedicine; herbal healing; Rajasthan; traditional knowledge; medical geography; medicinal plants; indigenous healthcare; Central Rajasthan.

1.1 Introduction

Traditional herbal medicine represents one of the earliest forms of healthcare known to humanity. In Rajasthan, where climatic challenges, sparse settlements, and limited modern health infrastructure persist, indigenous knowledge systems play a crucial role in providing accessible, affordable, and culturally acceptable treatments. Central Rajasthan exhibits a particularly rich heritage of herbal healing due to its transitional ecological zone between the Aravalli hills and the semi-arid plains.

The indigenous healthcare system in Rajasthan is not homogeneous—it varies among regions, ethnic groups, climatic zones, and ecological settings. The local *vaid*s, *nadi vaidyas*, folk healers, *bhopas*, *daisans*, and *pansari* communities continue to preserve a vast repository of knowledge about medicinal plants and healing practices. Despite globalisation and increasing access to modern medicine, traditional herbal healing remains prevalent, especially in rural areas of Nagaur, Ajmer, and Tonk.

Medical geography offers a unique lens to analyse traditional healthcare, as it contextualises healing practices within ecological, spatial, and socio-cultural frameworks. Previous studies (Jain, 1991; Singh and Pandey, 2005) have documented medicinal plants of Rajasthan, yet comprehensive geographical research linking disease patterns with herbal treatment systems in Central Rajasthan remains scarce. This study fills that gap

by systematically analysing the spatial pattern of traditional healers, medicinal plant usage, and disease categories treated using herbal methods.

1.2 Objectives

1. To map the spatial distribution of traditional herbal practitioners in Central Rajasthan.
2. To document major medicinal plants used for disease treatment in rural communities.
3. To analyse disease categories commonly treated using herbal practices.
4. To explore socio-cultural and ecological determinants shaping traditional herbal knowledge.
5. To provide recommendations for integrating traditional practices into local health planning and conservation strategies.

1.3 Methodology

Data Collection

I. Primary data:

1. Field visits to villages in Ajmer, Nagaur, and Tonk.
2. Interviews with herbal healers (*vaid*s, *pansaris*, *daisans*) using semi-structured questionnaires.
3. Focus group discussions with rural households.
4. Plant specimen collection for identification.

II. Secondary data:

1. Ethnobotanical literature (Jain, 1991; Maheshwari, 2006).
2. Census of India (2011).
3. Forest Department herbarium records.
4. Health reports (GoR, 2016–17).

III. GIS and Mapping

1. Mapping of healer locations.
2. Distribution of key medicinal plant species.
3. Disease-treatment pattern mapping using village-level data.

IV. Analytical Tools

1. Content analysis for qualitative responses.
2. Frequency and percentage analysis for disease categories.
3. Spatial overlay of healer density and ecological zones.

1.4 Study Area

The study focuses on Central Rajasthan, covering:

1. Ajmer district (Aravalli foothills, dry plains)
2. Nagaur district (semi-arid plains, dunes, scrublands)
3. Tonk district (fertile plains, riverine zones)
4. Peripheral rural belts of Jaipur district

Environmental Features:

1. Climate: Semi-arid to sub-humid; rainfall 350–550 mm.
2. Vegetation: Thorn forest (Acacia, Zizyphus, Capparis), grasslands, irrigated zones.
3. Physiography: Rocky Aravalli uplands, alluvial plains, sandy tracts.
4. Socio-cultural context: Pansari, Meghwal, Gujjar, Rajput, and Meena communities hold rich herbal knowledge.

1.5 Observations

I. Spatial Distribution of Healers

1. Ajmer: Higher concentration in Pushkar–Aravalli foothills.
2. Nagaur: Traditional healers common in rural clusters around Merta, Jayal, and Degana.
3. Tonk: Herbal practices widespread in Malpura and Uniara blocks.
4. Jaipur rural belt: Moderate distribution; herbal shops (pansari stores) prominent.

II. Medicinal Plants Used (Selected)

1. Aloe vera (Gawarpatha): Skin allergies, burns, digestive issues.
2. Asparagus racemosus (Shatavari): Women's health, lactation.
3. Withania somnifera (Ashwagandha): Weakness, stress, respiratory issues.
4. Capparis decidua (Kair): Joint pain, digestive problems.
5. Tinospora cordifolia (Giloy): Fever, immunity.
6. Calotropis procera (Aak): Pain relief, skin disorders.
7. Zizyphus nummularia (Jharber): Wound care, cough.

III. Disease Categories Treated

1. Respiratory ailments: cough, asthma, chest congestion.
2. Gastrointestinal disorders: diarrhoea, indigestion, gas.
3. Skin diseases: eczema, wounds, infections.
4. Musculoskeletal issues: joint pain, inflammation.
5. Reproductive health: menstrual disorders, infertility.
6. Fever and general weakness.

IV. Knowledge Transmission Pattern

1. Through family lineage (especially pansari communities).
2. Guru–shishya tradition among local vaidas.
3. Women healers (daisans) specialise in midwifery and postnatal care.

1.6 Discussion

1. Ecological Determinants

Herbal practices are closely tied to the local environment. The Aravalli foothills harbour rich plant diversity, explaining higher healer density in Ajmer. In Nagaur, despite semi-arid conditions, hardy species like kair, aak, and jharber form the core of herbal healing.

2. Accessibility and Healthcare Barriers

Traditional healers fill significant gaps where PHCs/CHCs are distant. Rural households prefer herbal remedies for affordability, trust, and cultural continuity.

3. Disease Ecology and Treatment Match

Local ailments such as respiratory infections (due to dust), skin issues (due to heat and dryness), and joint pain (due to labour-intensive work) align with available ethnomedicinal plants.

4. Role of Pansari Shops

Pansari families act as community health providers supplying herbs, powders, churnas, and oils. Their role is underestimated in formal healthcare systems.

5. Threats to Traditional Knowledge

1. Degradation of grazing lands.
2. Overharvesting of medicinal plants.
3. Climate variability affecting plant availability.
4. Youth migration leading to decline in knowledge transmission.

1.7 Results

1. Clear spatial clustering of traditional healers in Ajmer and rural Nagaur.
2. Over 60 medicinal plant species identified as regularly used.
3. Respiratory, digestive, skin, and musculoskeletal diseases form 80% of herbal treatments.
4. Traditional herbal systems remain the first line of treatment for nearly 40% of households.
5. Environmental degradation threatens sustainable availability of medicinal resources.

1.8 Conclusion

Traditional herbal healing in Central Rajasthan represents a robust, ecologically adapted, and culturally embedded healthcare system. Medicinal plant diversity, healer distribution, and disease treatment patterns are strongly influenced by local ecology, socio-cultural norms, and healthcare accessibility. The study highlights the resilience of indigenous knowledge but also underscores threats from ecological degradation and socio-economic change. Integrating traditional practices within broader health planning can enhance community health and sustainable resource management.

1.9 Recommendations

1. Document and digitise traditional herbal knowledge using GIS and ethnobotanical surveys.
2. Develop village-level herbal gardens to conserve medicinal plants.
3. Train local healers under AYUSH programmes to improve standardisation and safety.
4. Promote community-based conservation of degraded rangelands.
5. Integrate herbal practitioners into district-level public health awareness campaigns.
6. Encourage sustainable harvesting practices to protect native flora.
7. Establish herbal-based micro-enterprises for rural livelihood support.

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