RESEARCH PAPER

# Ethnobotanical Evaluation of Traditional Knowledge and Indigenous Conservation Practices in Kanpur Dehat and Kanpur Nagar, Uttar Pradesh, India

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**Received:** 25th June 2026; **Revised:** 28th July 2026; **Accepted:** 10th October 2026; **Available Online:** 15th October 2026

***ABSTRACT***

The present study documents the ethnobotanical knowledge, traditional medicinal practices and perception pertaining to the use and conservation of plant resources among local communities of Kanpur Nagar and Kanpur Dehat districts of Uttar Pradesh, India. The field survey was conducted in selected rural and urban areas like Bagpur, Derapur, Basausi, Chiranjeevpurva, Shobhan, Maitha, Rawatpurgaon, Kalyanpur and other villages of the study area from August 2025 to January 2026. Data were collected through field observations, open-ended interviews, group discussions and interactions with traditional healers and local knowledge holders. There were 135 informants who participated in the study, including 78 males and 57 females. Information on plant identity, common names, parts used, ailments treated, methods of preparation and modes of administration were recorded. Collected plant specimens were taxonomically identified and kept as herbarium specimens.

The study documented a range of medicinal plants that are traditionally used to treat various ailments such as fever, cough, skin disorders, wounds, inflammation, digestive problems, respiratory ailments, headache, tooth and gum problems and other health conditions. The most commonly used plant part was leaves, followed by whole plants, fruits, stems, roots, bark, seeds, flowers and latex. The main routes of preparation were paste [38%], juice [24%], powder [20%], decoction [12%] and fresh plant material [6%]. Results indicate that the indigenous communities of the study area still rely on medicinal plants for primary and supportive health care and possess valuable traditional knowledge concerning their preparation and application. But this information is mostly held by older traditional healers and is increasingly at risk as younger generations are losing interest. Therefore, systematic documentation, conservation of medicinal plant resources and integration of indigenous knowledge with scientific ethnobotanical, phytochemical and pharmacological investigations are important for the preservation of this valuable biocultural heritage and promotion of sustainable utilization of medicinal plant resources.

**Keywords:** Traditional Medicine, Traditional Healthcare, Biodiversity Conservation, Medicinal Plants, Kanpur Nagar, Kanpur Dehat, Indigenous Knowledge, Ethnobotany.

***How to cite this article:*** *Jyoti Nanda Sharma1** Ved Prakash Yadav2** Noopur Singh3 Gyan Prakash4 Irfana Khan2 Rachana Singh2 Tripti Bisaria4 Amit Prakash Raghuwanshi2*. Ethnobotanical Evaluation of Traditional Knowledge and Indigenous Conservation Practices in Kanpur Dehat and Kanpur Nagar, Uttar Pradesh, India. Int J Drug Deliv Technol. 2026;16(88s):1785-1798. DOI: 10.25258/ijddt.16.88s.179.*

*Source of support:* ***Nil.***

***Conflict of interest:*** *None*

## Introduction

Large numbers of people living in various parts of the world, including India, depend on nature for their daily needs such as food, fodder, and medicine (Gadgil, M.; *et al*., 2021) [1]. Many traditional practices and knowledge of medicinal plants are

being lost over time. Natural resources, such as trees, are crucial for the livelihoods of indigenous or ethnic communities (Asif, M.; Haq *et al*., 2021) [2]. These communities have a long history of using resources and possess deep knowledge of how complex natural systems function. This knowledge has built up over many years through traditions passed down from generation to generation (Gadgil, M.; Berkes *et al*., 1993) [3]. A community's traditional knowledge is vital for identifying useful plants, as this knowledge has been investigated by generations of indigenous people (Cox, P.A. *et al*., 2000) [4] (Jacob, M.O. *et al*., 2004) [5]. Therefore, traditional knowledge related to the use of medicinal plants or ethnobotanical knowledge is natural and comes from a long-standing collection of wisdom. Scholars, interpreters, policymakers, and even indigenous communities recognize the importance of indigenous knowledge in biodiversity conservation. This acknowledgment is a positive development in today's complex global environment (Gadgil, M.; *et al*., 2021) [1]. Although many indigenous people are largely illiterate, they have a rich heritage of social and cultural practices and a formative understanding of biodiversity conservation and management (Battiste, M. *et al*., 2000) [6]. Various factors, such as age and gender, along with education, occupation, and cultural influences, affect traditional knowledge (Shaheen, H. *et al*., 2017) [7] however, age and gender are often studied for their effects on this knowledge. Documenting this knowledge is essential because it is dynamic and evolves over time, influenced by age, culture, and resources. Currently, much of this information remains largely with elders (Amjad, M.S. *et al*., 2017) [8]. There is now a shift from merely gathering ethnobotanical data to a more practical approach that recognizes the importance of conserving and sustainably using plant resources (Ishtiaq, M. *et al*., 2013) [9]. One of the biggest challenges faced by nations and the world is the loss of biodiversity and the need for conservation for future generations (Farooquee, N.A. *et al*., 2004) [10]. Indigenous people play a crucial role in biodiversity conservation worldwide due to their close connection to plants and animals (Mavhura, E. *et al*., 2019) [11]. India is rich in ethno-botanical knowledge. About 80% of India’s population, particularly in central and eastern regions, belongs to various ethnic groups. Ethno-botany explores how plants are used for food, shelter, medicine, clothing, hunting, and religious purposes. This knowledge serves as a foundation for new drugs, highlighting active components for phytochemicals and pharmacological research (Ahmad S.S. (2007) [12]. Kanpur is a significant part of Uttar Pradesh. Much of the Kanpur area is covered with forests that yield many types of medicinal plants. These plants have been used in Ayurvedic medicine for thousands of years. Ethno-botanical studies some villages in Kanpur district, U.P., India. The knowledge of plants used by people is based on centuries of experience. Plants are one of the most important sources of medicine. The use of plants as medicine dates back to the Neolithic period. Our traditional systems of medicine include Ayurveda, Unani, Siddha, and Homeopathy (Sharma A., Santvan V.K. *et al*., 2014) [13]. Recently, there has been a global trend towards traditional systems, making ethno-botanical studies increasingly valuable for developing healthcare systems worldwide (Zaidi MA. *et al*., 2005) [14]. India is home to 427 different ethnic communities. Its rich and diverse flora serves as an incredible repository of medicinal plants. Medicinal plants are a primary source of medicine in India, serving preventive, promotional, and restorative purposes. Traditional knowledge involves practices based on observation. In recent decades, there has been growing interest in studying medicinal plants and their traditional uses globally. These plants have been researched in both systematic and advanced fields of plant sciences. Documenting this knowledge is vital for conserving and utilizing natural resources. This treasure of information needs to be used and preserved for the sustainable development of future generations. The traditional knowledge of indigenous people can help identify natural resources, which can later meet the commercial needs of the population. Unexplored medicinal plants from remote regions need to be documented. These plants significantly impact medicine due to the high demand for herbal drugs and the potential extinction of natural flora (Murray S. *et al*., 2001) [15]. The lack of medical facilities and limited financial resources in rural communities promotes the use of indigenous wild plants for livelihood (Sofowora A. *et al*., 1982) [16]. In rural areas of developing countries, plants not only represent a key part of people's cultural heritage but also serve as herbal remedies for various ailments (Everest A. *et al*., 2005) [17]. Natural resources play a vital role in traditional herbal remedies and contribute to the economic development of local communities (Heinrich M. 2000) [18]. Self-treatment using traditional herbal medicines is common in many societies worldwide (Heinrich M. 2005) [19]. Medicinal plants used in traditional herbal medicines and pharmaceutical systems have significantly addressed human needs. The current growth of the Indian herbal medicine industry is nearly Rs. 8,500 crores, while the overall pharmaceutical industry is valued at Rs. 15,500 crores, with a growth rate exceeding 15 percent. India has extensive and rich resources of herbal raw materials and can establish a niche in the global herbal market if its domestic industry produces high-quality products meeting international standards. The knowledge of medicinal plants in India has been built over centuries, based on

various ancient medicinal systems, including Ayurveda, Unani, and Siddha (Lone PA. *et al*., 2013) [20]. According to a report by the World Health Organization, nearly 80% of people in the developing world rely on plant remedies for various health needs (WHO. Traditional Medicine, 2002) [21]. India, one of the most biodiverse regions in the world, has various socio-economic, cultural, linguistic, and artistic areas. Therefore, the indigenous knowledge of medicinal plants and their uses in treating ailments is likely prevalent in this country (Chandel KP. *et al*., 1996) [22]. Reports indicate that about 70% of ethnic and rural populations in India largely depend on medicinal plants for primary healthcare due to inadequate access to modern healthcare systems. The knowledge about the medicinal properties of plants has been passed down traditionally through generations via healers. Besides ethnic groups, many other forest dwellers and rural people hold unique knowledge about plant applications. The role of indigenous knowledge in conserving medicinal plants is widely acknowledged (Msuya, T.S. *et al*., 2009) [23], (Nimachow, G. *et al*., 2011) [24]. However, nearly 15,000 medicinal plant species worldwide are at risk of extinction, suggesting that the planet loses at least one potential major medicinal species every two years (Roberson, E. 2008) [25], (Chen, S.L. *et al*., 2013) [26]. To address this issue, several researchers argue that conserving medicinal plants should involve community engagement, utilizing their experiences developed and transmitted over time through oral traditions and valuable practices for sustainable conservation of medicinal plants (Heywood, V.H. 2017) [27], (Abdela, G. and Sultan, M. 2018) [28], (Mapara, J. 2009) [29], (Da Silva. *et al*., 2019) [30]. Community participation is essential in achieving economic, political, social, and environmental goals that support conservation. There is also a connection between indigenous knowledge and the environment where medicinal plants thrive (Augustino, S. and Gillah, P.R. 2015) [31],[32]. This means the sustainability of these plants relies on the community and their understanding of their uses and significance. Thus, this paper aims to explore the knowledge gap surrounding the use of indigenous practices for conserving medicinal plants to ensure their sustainability and assess the factors affecting the use of this knowledge in conservation. A considerable indigenous knowledge database still exists within the local communities of the study area, warranting investigation and documentation. Additionally, no study has been conducted on local understandings regarding the conservation and use of plant resources in this region. Against this backdrop, the present study was conducted to achieve the following objectives:

1. Investigate and document the plant species used by local communities in the Kanpur Nagar and Kanpur Dehat district to meet their daily needs.
2. Determine the perceptions of local people towards the conservation and use of biodiversity in the area.

This paper attempts to explore the traditional ethno-medicinal knowledge of the study area, which has generally remained unexplored, shedding light on the valuable use of medicinal plants and their cultural significance in remedial practices.

**Methodology**

**Present works**

Several field passages were visiting in between 16 October to January 2026 in original people inhabited points Bagpur, Derapur, Basausi, Chiranjeevpurva, Shobhan, Maitha, Rawatpurgaon, Kalyanpur in Kanpur Dehat, and Kanpur Nagar quarter and the information on uses of shops was collected through the interviews with the original people it is deeply embedded in their socioeconomic culture. Still, the attestation of original medicinal practices is distinctly absent for the region. The uses of shops were recorded in the field book. The identity of shops was verified by matching two shops with the foliage of region. The purpose of this check was explained to them in details, and previous informed concurrence was taken as per ethical guidelines of the International Society of Ethnobiology (Census of 2011) [31,32] . The townlets were visited in different seasons to get the factory in its flowering condition. Shops were refocused out by the snitchers and their original names, used factory corridor, expression and tablets were also recorded.

**Study area**

According to recent Uttar Pradesh government protrusions on the Official Kanpur Nagar and Kanpur Dehat District Website, the estimated population for 2026 is roughly. Detailed statistics can be vindicated through the Census 2011 India database or the Kanpur Dehat District Portal. Kanpur Nagar is one of India's most vibrant civic areas, housing the major artificial megacity of Kanpur. In discrepancy, Kanpur Dehat remains over 90 pastorals.

Kanpur Dehat is located to the West of Kanpur Nagar. Kanpur Dehat Ranked 268th in India by population. Kanpur Dehat serves as the quiet, agrarian backbone of Central Uttar Pradesh, offering a stark yet fascinating discrepancy to the artificial chaos of its neighbour, Kanpur Nagar. Geologically, the quarter is defined by its placement within the rich Ganga- Yamuna Doab, a vast alluvial plain created by glories of swash deposits. The quarter gained significant public pride as the motherland of India’s 14th President, Ram Nath Kovind, turning the humble village of Paraukh into a symbol of the region's socio-

political eventuality. Unlike the fast- paced, Urdu-told urbanity of the near megacity, the literature and myth then are deeply embedded in Braj and Awadhi influences, celebrating a heritage that feels ancient and slow. The executive headquarters at Mati. While Kanpur Nagar ranking of 32nd in India (out of an aggregate of 640) while. Its population growth rate over the decade 2011, 2012 was 9.72%. Kanpur Nagar has a coitus rate of 852 ladies for every 1000 males and a knowledge rate of 81.3112%. Kanpur quarter is positioned in central region of U.P. It's positioned between 25° 26! N and 26° 58! Longitude and 97° 31! and 80° 34! E Latitude. The quarter is bounded by Hardoi on the North, Unnao and Fatehpur quarter on the east, Hamirpur quarter on the south and Kannauj and Kanpur Dehat quarter on the west. Kanpur is the artificial capital of U.P. and generally known as the Manchester of Northern India. It is a part of Kanpur division and its distribution is in Kanpur megacity.

**Survey**

Ethno- medico- botanical check was conducted during the, August 2025 to January 2026 in some areas viz. Bagpur, Derapur, Basausi, Chiranjeevpurva, Shobhan, Maitha, Rawatpurgaon, Kalyanpur in Kanpur Dehat, and Kanpur Nagar quarter U.P., India. Before starting the field work on medicinal uses of shops and the study area, general information about that area was collected from the original people. The study area was surveyed aimlessly from August 2025 to January 2026. Interviews and detailed conversations were conducted with the original people who have unique knowledge about the medicinal uses of shops. According to a check conducted by an original on-government association [NGO], the overall knowledge of the exploration area is 40-60 for ladies to males independently. The conversations contain the details of the shops, corridor used, medicinal uses, mode of medication. The collected shops were linked taxonomically using the Indian medicinal factory literature to ascertain the title. Plant collected from area were linked and eventually deposited in the herbarium of the Department of Botany, D.A.V. College Kanpur [U.P.] India. The present study was accepted to explore the ethno medicinally used shops of the quarter and to induce data conformation future reference and study. Almost of the factory being wild were collected from roadside, timbers, fields etc. The factory with their ethnical uses is described alphabetically with botanical name, original name, family, traditional use, distribution, morphology, chemical ingredients, and other useful information (Jain S.K. and Goel A.K. 1995) [34]. Original traditional healers' Original traditional healers having practical knowledge of shops in drug were canvassed in 12 townlets of the quarter during October 2025– January 2026. During the course of the study, four field passages were carried out in the study area totalling 100 days. Styles of opting snitchers depended upon the distribution of original people having folk knowledge. They were requested to collect samples of the shops they knew or to show the factory species on point. These snitchers were traditional healers themselves or had tradition of mending in their families and had knowledge of the medicinal use of the shops. Energy wood from the surroundings was the main energy source for cuisine and eating. The wealth of medicinal factory knowledge among the people of this quarter is grounded on hundreds of times of beliefs and compliances. This knowledge has been transmitted orally from generation to generation; still it seems that it is evaporating from the ultramodern society since youngish people are not interested to carry on this tradition. Snitchers were asked to come to field and show the shops with original name; the species mentioned by the snitchers were taxonomically linked.

**Data Collection**

A comprehensive ethnomedicinal dataset was recorded from the village such as Mandhana, Naramau, Bithoor, Baghpur, Maitha, Bhauti, Ghatampur, Ruma, Maharajpur, Sarsaul, Bilhaur, Shivrajpur belong to Kanpur Nagar districts and Kanpur Dehat districts between October 2025 and January 2026. To obtain first-hand information about the indigenous uses of medicinal plants, a total of 135 key informants were surveyed, including 78 males and 57 females, such as local traditional herbalists and formers [Table 1]. The local inhabitants still depend on plant resources for a variety of needs, including food, fodder, house construction, fencing, agricultural tools, and healthcare. Group discussions and open-ended interviews were conducted at common social gathering places for men, which helped highlight important issues and perspectives of the local people regarding natural plant resources. The informants were asked about the local names, uses, plant parts utilized, and modes of administration of medicinal plants. Most of the male respondents were farmers. The repliers were canvassed were canvassed in their original local language. They were mugged together along with the collected factory species for furnishing due help in the identification of plants. Informed concurrence was attained from the actors who validated the authenticity of the herbal drugs used for the treatment of different conditions. They also conceded that the collection of data and findings from the study followed an honoured protocol. Evidence of indigenous medicinal uses of shops was vindicated from the original healers.

**Collection and Identification of Medicinal Plants**

During the field survey, the reported medicinal plants were collected with the help of local people, and their uses were documented along with the method of administration, which was confirmed by

the local herbalists. During the field survey, relevant information like the habit, habitat, and collection date of the plants was recorded in a notebook. During the field survey, local people accompanied the researcher to different locations in the study area. They helped in collecting and identifying the medicinal plants by giving information about the vernacular names of the plants. The plants were first tagged, wrapped in blotting sheets, and placed in polythene bags after collection. They were dried properly and mounted on herbarium sheets for identification and then submitted to the Applied Plant Research Lab, Department of Botany.

**Data Analysis**

To analysis the data more clearly, obtaining from the informants, we have set up our own database with the help of Microsoft Access version 2007, and the parameters were name of the taxon, family name, vernacular names, parts used, diseases treated, and mode of administration or medicinal uses. We have also analyzed the percentage of the used parts of the plant species and growth forms of the species by putting them in the graph.

Quantitative analyses Quantitative analysis of ethnobotanical checks can lead to the identification of the most important checks among those obtained, which can be very helpful in further pharmacological studies. The quantitative analyses are as follows:

1. Frequency of citation [FC] the number of interviewees reporting the use of a factory species as a remedy for any disease.

2. Relative frequence of citation [RFC] calculated according to (Mahapatra M. *et al*., 1996) [35] as follows

RFC = Frequency of citation / Total number of snitchers

3. Artistic significance indicator [CII] calculated according to (Tardío J, Pardo-de-Santayana M. 2008) [36] as follows

CII = Total number of use reports Total number of snitchers

4. Replier agreement factor [RIC] calculated according to (Trotter RT, Logan MH. 1986) [37] as follows

RIC = Nur – Nt / Nur-1

Nur = Number of use reports for a complaint order; Nt = Total number of shops used as remedy for the complaint order.

**Result and discussion**

**Geographical location of the study area**

Figure 1[A]. Kanpur Dehat Figure 1[B]. Kanpur Nagar

**Figure 1:** Map showing study area 1[A] Kanpur Dehat district and 1[B] Kanpur Nagar district of Uttar Pradesh.

The study area, consisting of Kanpur Dehat district [Figure 1A] and Kanpur Nagar district [Figure 1B] in Uttar Pradesh, India. Details about these districts can help readers understand the geographic context of studies of traditional herbal medicine use. Other advantages of studies focused at the district level include information about relationships between humans and other organisms related to traditional medical care. Other advantages of studies focused at the district level include efforts to document and protect indigenous knowledge of medicinal plants. A previous ethnobotanical study found 87 medicinal plant species from 42 families and 82 genera in Kanpur district, indicating diverse traditional medicinal uses in the area (Nigam & Bharati, 2018)[38]. Information from a previous study about medicinal plant use in Kanpur district may be useful for understanding medicinal plant use in Kanpur Dehat and Kanpur Nagar districts. Figure 1 includes a map showing the locations of previous and current studies but does not provide evidence about differences in medicinal plant diversity and use between the two districts. Other forms of evidence, including field observations and other data, would be useful for comparing medicinal plant use in the two districts.

**Traditional medicinal plants and their therapeutic applications**

Figure 2 lists traditional medicinal uses of plants for 11 health conditions: fever, cough, skin diseases, wound treatment, anti-inflammatory use, antioxidant use, heart disease, blood purification, respiratory diseases, digestive problems, and stress reduction. Multiple medicinal uses of plants indicate widespread traditional use of plants to treat many conditions, including skin and wound problems and digestive issues, and for general well-being. (Nigam, G., & Bharati, D. 2018) [40]. The reported applications for fever, cough and respiratory complaints underscore the significance of traditional plant-based remedies in alleviating common health issues. Similarly, medicinal plants used for skin diseases and wound healing suggest their traditional use for external purposes. Their reported use for digestive problems and stress further illustrates the diversity of health-related purposes associated with ethnomedicinal knowledge. These findings are in line with the increasing acceptance of traditional medicine as a significant component of healthcare in many communities, including in India (World Health Organization [WHO], 2025) [41]. The categories of



"heart disease" are broad categories of traditional usage that need to be precisely defined and their therapeutic implications validated with species-specific evidence before any conclusions can be drawn. The scientific relevance of the reported applications could be established by the identification of plant species, plant parts used, preparation methods, dosage and available experimental or clinical evidence.

Figures 1 and 2 are complementary, Figure 1. Geographic context of the study. Figure 2. Summary of the reported therapeutic breadth of traditional medicinal plants. They are useful to document local ethnomedicinal knowledge and to identify potential priorities for further phytochemical, pharmacological and clinical research. WHO recommends that the safety, quality and efficacy of traditional medicinal products should be evaluated in accordance with appropriate scientific evidence before their therapeutic benefits are confirmed or their use for specific diseases is recommended (WHO, 2025) [41].

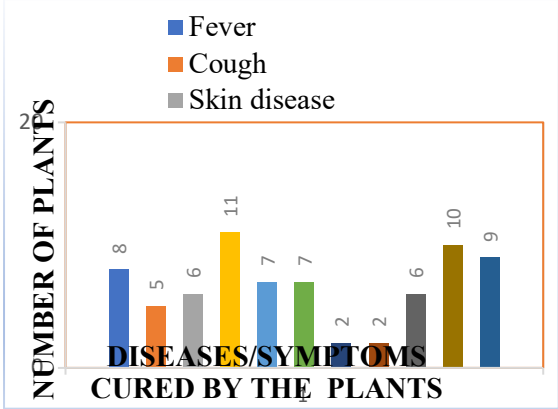



**Figure 2:** Traditional medicinal plants may cure 11 types of infectious diseases. Such as fever, cough, skin disease, wound healing, anti-inflammation, antioxidant, heart disease, blood purifier, respiratory ailments, digestive problem, stress.

**Demographic Profile of the Informants**

A total of 135 respondents were interviewed for the present study. The socio-demographic characteristics of the informants, including gender, age, and educational status, were recorded and analyzed to understand the background of the study participants. The distribution of respondents according to these socio-demographic variables is presented in (Table 1). The findings reveal that males were the majority of the study participants 57.78%, (n=78), while females were 42.22% (n=57). This distribution indicates that both men and women contributed to the documentation of traditional medicinal knowledge, although the male informants were more in number in the surveyed population. This difference in representation should not, however, be taken as evidence that men have more medicinal knowledge than women, for the table does not measure levels of knowledge or compare the responses of male and female participants.

According to the age distribution, informants between the ages of 46 and 55 made up the largest group 37.04%, (n = 50), followed by those between the ages of 56 and 65 (29.63%, n = 40). These two age groups together made up 66.67% of the responses. 18.52% (n=25) of the participants were between the ages of 25 and 35, while 14.81% (n=20) were between the ages of 36 and 45. The majority of interviewees in this survey were 46 years of age or older, indicating that middle-aged and older community members were the main source of information on traditional plant use. This pattern is pertinent to ethnobotanical research since knowledge of medicinal plants is frequently obtained through personal experience, family customs, and intergenerational. (Reyes-García *et al.* 2009) [42], for instance, looked at the connection between age and traditional ecological knowledge, emphasizing the significance of taking age and knowledge transmission into account when analyzing ethnobiological data. Illiterate informants made up the largest category 33.33%, (n=45) in terms of educational status. While respondents with primary and middle-level education each made up 14.81% (n=20), those with secondary education and higher secondary education or beyond made up 18.52% (n=25). Accordingly, the results show that participants with a variety of educational backgrounds—including those without formal education—documented traditional medical knowledge. This finding emphasizes how crucial it is to record community-based information that might not be adequately represented in official scientific or educational records. (Torres-Avilez *et al.* 2016) [39], found no consistent global pattern of gender differences in medicinal plant knowledge, although differences occurred in specific countries and regions, supporting the significance of interpreting gender and other demographic characteristics in their local context. Formal education should not be the only criterion used to assess ethnomedical knowledge. Family customs, social connections, and firsthand plant experience are common ways that traditional medical knowledge is passed down.

**Table 1:** Summary of the demography of the respondents in Kanpur Nagar and Kanpur Dehat, Districts.

| Variable | Category | No. of Informants | % Percentage |
|---|---|---|---|
| Gender | Male | 78 | 57.78 |
| | female | 57 | 42.22 |
| Age (in years) | 25-35 | 25 | 18.52 |
| | 36-45 | 20 | 14.81 |
| | 46-55 | 50 | 37.04 |
| | 56-65 | 40 | 29.63 |

| | | | |
|---|---|---|---|
| Education Level | Illiterate | 45 | 33.33 |
| | Primary | 20 | 14.81 |
| | Middle | 20 | 14.81 |
| | Secondary | 25 | 18.52 |
| | Higher Secondary or Above | 25 | 18.52 |

**Diversity and traditional medicinal uses of plants**

Table 2 shows 30 medicinal plant entries of Kanpur Nagar and Kanpur Dehat, Uttar Pradesh, with their botanical diversity, traditional uses, and preparation methods. These results provide a basis for the future ethnobotanical, phytochemical and pharmacological study. However, the absence of quantitative data, chemical analyzes and experimental validation restricts the conclusions on their relative importance, efficacy and safety. Herbs, shrubs, trees, climbers, and succulents are among the many botanical groups and growth types represented by the species. *Asparagus racemosus*, *Curcuma longa, Ocimum tenuiflorum, Tinospora cordifolia, Withania somnifera*, and *Aloe vera* are a few notable examples. Although species abundance and ecological dominance cannot be ascertained without quantitative vegetation data, these findings demonstrate the botanical diversity supporting traditional healing in the studied area. Many illnesses, including as intestinal worms, skin diseases, wounds, pain, cough, inflammation, leucorrhoea, and snake and spider bites, are historically treated with the described medicinal plants. *Abutilon indicum*, for instance, is used to treat piles and dysentery, while *Aloe vera* and *Nerium oleander* are used to treat wounds and skin disorders. Although the claimed uses do not prove clinical efficacy or safety, these findings demonstrate the richness of local ethnomedical knowledge. Various plant components, such as leaves, roots, stems, seeds, fruits, and entire plants, are prepared as decoctions, powders, pastes, juices, or direct applications in the reported cures. For instance, *Boerhavia diffusa* leaf paste, *Curcuma longa* powder paste, and *Ocimum tenuiflorum* leaf paste are used for skin conditions, wounds, and spider bites, respectively, while *Asparagus racemosus* root decoction is traditionally used for urinary ailments. The statistics do not determine the relative frequency, chemical composition, or comparative therapeutic efficacy of these activities, which represent a variety of traditional preparation techniques influenced by local knowledge and customary use. Table 2 also lists the vernacular names such as Haldi, Giloy, Brahmi, Punarnava, Ashwagandha and Kapoor tulsi that connect the botanical identification with local plant knowledge. The documentation of such names, including the traditional methods of preparation and application, contributes to the conservation of ethnobotanical knowledge and facilitates future research on plant use, knowledge transfer, and sustainable resource management. Botanical authentication is still essential as vernacular names may vary from one community to one region. The documented medicinal plants provide a basis for selection of species for further phytochemical, pharmacological and toxicological studies particularly those traditionally used for wound healing, skin disorders, digestive problems and inflammation. The selection criteria should include informant citations, consistency of uses, authentication of specimens, and scientific evidence available. Components of plants and techniques for preparation. The table shows that various plant components are utilized based on regional customs, such as leaves, roots, stems, seeds, fruits, and entire plants. The methods of preparation encompass decoctions, powders, pastes, squeezed juices, and direct topical applications. For example, a root infusion of *Asparagus racemosus* is noted for urinary issues, while a leaf paste from *Boerhaavia diffusa* is customarily used for skin ailments. *Curcuma longa* powder is mixed into a paste for treating wounds and injuries, while *Ocimum tenuiflorum* leaves are also turned into a paste for use on spider bites. Further studies should include standardized extraction, phytochemical characterization, biological assays and toxicity evaluation and subsequently mechanistic or clinical studies, where justified. Serious conditions such as snakebite and toxic species such as *Nerium oleander* require extreme caution. You can't use traditional uses to determine efficacy, dosage, mechanisms or safety.

**Table 2:** List of some medicinal plants used by the local people of Kanpur Nagar district, U.P. India and Kanpur Dehat district, U.P. India

| S. N. | Scientific name | Vernacular name/ Local Name | Family | Ailments | Usages by Tribes in various remedies |
|---|---|---|---|---|---|
| 1. | *Asparagus racemosus Willd.* | Satavari | Liliaceae | Urine problem | Spoonful decoction of root are used 5-10 Days |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | in the evening to reduce pains during urination problem. |
| **2.** | *Abutilon indicum Linn.* | Kanghi grass | Malvaceae | Dysentery and piles | Dry leaves powder 1 tsp. is used with 1 glass hot water to cure dysentery and piles. |
| **3.** | *Achyranthes asper Linn.* | Latjeera | Amarantaceae | Gums problem | To take 15-25 fresh leaves boiled with water than decoction is used gargle to cure gums pain, 4-6 days. |
| **4.** | *Bauhinia variegate Linn.* | Kachnar Tree | Fabaceae | Liver problem | Grind the leaves extract to take twice a day to cure improvement liver function. |
| **5.** | *Boerhaavia diffusa Linn.* | Punarnava Shrub | Nyctaginaceae | Skin problem | To make a leaves past to cure skin disorders for 1 month. |
| **6.** | *Bacopa monniera Linn.* | Brahmi, Herb | Scrophulariaceae | Headache | To make a leaves paste is applied into cure headache for 1 months. |
| **7.** | *Curcuma longa Linn.* | Haldi, Herrb | Zingiberaceae | Wounds | Haldi powder paste applied on wounds and injuries |
| **8.** | *Clitoria ternatea Linn.* | Aparajita, Climber | Fabacea e | Headache | Take to root of herb wash and clean, extract juice by crushing and adding water and then 3-4 drops |

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| | | | | | in each nostril to get relief from headache. |
| **9.** | *Citrus limonum Linn. Burm. f.* | Nimboo, Tree | Rutaceae | Stomach problem | Fruit juice is traditionally used to cure stomach problem in summer season. |
| **10.** | *Cymbopogon flexoues Spreng.* | Lemon grass, Shrub | Poaceae | Gastric problem | To take 7-10 fresh leaves of lemon grass boiled with 2 cup water, adding sugar to taste and a slice of ginger, to cure gas problem 15 days. |
| **11.** | *Euphorbia hirta Linn.* | Choti-dudhi, Shrub | Euphorbiaceae | Leucorrhoea problem | To take fresh whole plant to make a paste and take it with water 2-3 days, in the evening to cure leucorrhoea problem. |
| **12.** | *Jatropha curcas Linn.* | Ratanjot, Shrub | Euphorbiaceae | Stomach disorder | To take seed powder 1 tsp. with milk in the evening to cure in stomach disorders for 1 month. |
| **13.** | *Launaea asplenifolia Willd.* | Jangali-gobhi, Shrub | Asteraceae | Piles | To take leaves, grind the leaves and root, take it with water to cure treatment of piles for 3 months. |
| **14.** | *Lantana* | Kuri, Shrub | Verbinaceae | Cough | 15-20 fresh |

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| | *camara Linn.* | | | | leaves of lantana to boiled with water then the decoction is given to cure cough problem for 4-5 days. |
| **15.** | *Nyctanthes arbortristis Linn.* | Harsingar, tree | Oleaceae | Intestinal worm | To take fresh leaves juice and mixed with common salt to treat intestinal worms in 2 times for 3 months. |
| **16.** | *Nerium oleander Linn.* | Pink kaner, Shrub | Apocynaceae | Wounds | To take 15-20 Fresh leaves paste is applied in to cure skin disease and healing of wounds. |
| **17.** | *Ocimum tenuiflorum Linn.* | Kapoor tulsi, Herb | Lamiaceae | Spider bite | 10-15 fresh leaves to make a paste and applied in to cure spider bite. |
| **18.** | *Phyllanthus niruri Linn.* | Bhuiamla, Shrub | Euphorbiaceae | Itching problem | To take whole plant make a paste and applied to cure skin itching problem for 5-10 days. |
| **19.** | *Rauvolfia serpentine L.* | Sarpgandha, Shrub | Apocynaceae | Snake bite | To take some fresh leaves make a paste and applied in to cure snake bite in 3 times. |
| **20.** | *Tridax procumbens Linn.* | Ghamra, Herb | Asteraceae | Skin bleeding problem | Take to some leaves is rubbed and |

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| | | | | | juice is applied in cuts than stop bleeding. |
| **21.** | *Ocimum tenuiflorum Linn.* | Kapoor tulsi, Herb | Lamiaceae | Spider bite | 10-15 fresh leaves to make a paste and applied in to cure spider bite. |
| **22.** | *Withania somnifera Dunal.* | Ashwagandha, Shrub | Solanaceae | Leucorrhoea | To take 1 tsp. ashwagandha root powder with 1glass milk once a day in the knight to cure leucorrhoea problem for 2 months. |
| **23.** | *Ipomoea sepiaria* | Local name varies, Climber | Convolvulaceae | Digestive upset | Roots, leaves |
| **24.** | *Phyllanthus emblica* | Amla | Phyllanthaceae | Antioxidant | Antioxidant |
| **25.** | *Tinospora cordifolia* | Giloy, Woody climber | Menispermaceae | Immunomodulator | Stem |
| **26.** | *Hemidesmus indicus* | Anantamul | Apocynaceae | Anti-inflammation | Root, Anti-inflammation |
| **27.** | *Moringa oleifera* | Sahjan | Moringaceae | Anti-inflammation | Leaves, seeds |
| **28.** | *Tribulus terrestris* | Gokhru, Herb | Zygophyllaceae | Digestive tonic | Fruits |
| **29.** | *Adiantum spp.* | Hansraj | Pteridaceae | Respiratory ailments | Leaves |
| **30.** | *Aloe vera* | Ghritkumari, Herb (succulent) | Asphodelaceae | Skin burn, wound healing | Leaf gel |

The demographics of the informants and the traditional medicinal plants utilized by the local inhabitants in the districts of Kanpur Nagar and Kanpur Dehat in Uttar Pradesh, India, are detailed in the results shown in Tables 1 and 2. While Table 2 records 30 entries of medicinal plants, their vernacular names, botanical families, related illnesses, and claimed traditional cures, Table 1 details the respondents' gender, age, and educational background. When taken as a whole, these tables offer a foundation for talking about the connection between traditional ethnomedical knowledge documentation and community characteristics.

**Discussion –**

Different parts of the medicinal plants were used as medicine by the traditional healers. Out of the different plant parts, the leaves were mostly used for the cure of diseases, followed by whole plant parts, fruit, stem, root, stem and root bark, seed, flowers, and latex. There are four different methods of preparation, i.e., plant parts used as paste (38%), juice of plant parts (24%), powder of plant parts (20%), some fresh plant parts (6%), and decoction (12%). External application of the plant parts, mostly for the cure of skin diseases, snake bites, and wounds, and internal use of the plant preparations were involved in the cure of diseases.

**Conclusion -**

The current research records the variety of traditional herbal plants and their medicinal uses in the districts of Kanpur Nagar and Kanpur Dehat in Uttar Pradesh, India. Thirty entries of medicinal

plants were documented, showcasing a variety of botanical categories such as herbs, shrubs, trees, climbers, and succulents. The recorded plants are conventionally employed to treat various health issues, such as fever, cough, respiratory and digestive problems, skin disorders, wounds, inflammation, pain, and additional ailments. The research emphasizes the variety of plant components used, including leaves, roots, stems, seeds, and fruits, as well as conventional preparation techniques like decoctions, powders, pastes, juices, and direct applications. The demographic characteristics of the 135 informants reveal that traditional medicinal knowledge was recorded among various age groups, genders, and educational levels, with most respondents being middle-aged or older. Documenting local plant names, methods of preparation, and traditional uses aids in preserving community-centered ethnomedicinal knowledge and lays the groundwork for future ethnobotanical studies. These results also highlight potentially important plant species for additional phytochemical, pharmacological, and toxicological studies. The recorded traditional applications should not be viewed as proof of clinical effectiveness or safety. The lack of quantitative ecological information, uniform chemical analyses, and experimental confirmation restricts deductions about species prevalence, relative therapeutic significance, dosage, and efficacy. Subsequent studies should emphasize plant authentication, thorough recording of informant knowledge, eco-friendly conservation methods, and lab-based assessments of the biological effects and toxicity of chosen species. Extra care is required when examining plants linked to severe issues like snakebites and possibly harmful species like Nerium oleander. This research offers an initial scientific documentation of the traditional medicinal plant resources in Kanpur Nagar and Kanpur Dehat, forming a foundation for additional investigation, verification, and preservation of local ethnomedicinal wisdom.

**Acknowledgement**

The author is thankful to the ethnic traditional tribal informants who kindly shared their Ethano-Botanical information in the study area, research assistant involved in the study project, and Commissioner of Collegiate Education for encouragement. The authors are indebted to the indigenous people for revealing very valuable information about the use of plants.

**Disclosure statement**

None.

**Funding**

The authors are thankful to “Research & Development Scheme” Uttar Pradesh Higher Education Department, Govt. of Uttar Pradesh.

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