

# Study of Traditionally used Ethnomedicinal plants in Different Parts of Anantnag District, Kashmir Himalaya

Sabzar A Malik<sup>1</sup>, Gowher A Wani<sup>2</sup>, Irfan Iqbal Sofi<sup>3</sup>

<sup>1</sup>Institute of Basic Sciences, Department of Botany, Bundelkhand University, Jhansi (UP) 284128, India

<sup>2,3</sup>Department of Botany, University of Kashmir, Srinagar-190 006, Jammu & Kashmir, India

**Abstract:** Anantnag District is one of the districts of Kashmir with many remote areas where present day medicare facilities are lacking, and people generally depend on indigenous traditional plant based medicare system. The district has not been explored for its medicinal plants yet. The aim of this study was to document the medicinal plants used in the area to treat different human ailments. Personal observations of the utilization method, along with vernacular names, parts used and dose regime were elucidated. Six hundred individuals were interviewed between the age group of 20 and 79. The study found that 64 species, belonging to 40 families, are used to cure 48 ailments such as asthma, stomach problems, abdominal pain, rheumatism, and back pain amongst other. The most dominant families are Asteraceae (10 Species), Lamiaceae (9 Species) and Plantaginaceae (3 Species) respectively. Most commonly used parts in traditional medicare system are leaves and roots. Most of the studied plants are under threat due to the excessive use of these plants for medicine. It is recommended that some community based resource management measures be taken to conserve medicinal plant resources from becoming extinct.

**Keywords:** Medicinal plants, Anantnag district, Traditional uses, Conservation

## 1. Introduction

Kashmir valley is credited all over the world as a treasure of medicinal herbs providing refuge to these plants in its varied ecosystems. The alpine and sub alpine zones of Himalayas host a remarkably rich wealth of medicinal plants viz. *Aconitum heterophyllum*, *Podophylum hexandrum*, *Inularacemosa*, *Taxusbaccata*, *Rheum emodi*, *Arnebiabentharii* and *Saussureacostus* etc. These plants have proved of tremendous medicinal potential, serving as a source of wonder drugs (Ganieet al., 2010). Kashmir valley being the part of Himalayan Mountains reveals a wide diversity of medicinal plants which are being used as medicine since ages. It is very rich in high value and high altitude aromatic and medicinal plants, so this region has been regarded as veritable emporium of plant genetic resources especially the medicinal and aromatic plants. Several medicinal plants grow wild in the temperate and alpine habitats. Some native medicinal plants have been taken up for cultivation, for example *Dioscorea deltoidea* is now cultivated for its tubers which are rich in diosgenin and yield cortisone and steroid hormone.

Kashmir indigenous communities use some medicinal plant species as sources of food, fodder, and timber amongst other. Of 675 species of Himalayan wild edibles, 171 are used to treat various diseases. The crop plants are also a source of traditional medicine in this region (Samant et al., 2001; Alagesaboo pathi, 2011).

The projected escalating demand of medicinal plants had led to the over harvesting of many plants from wild, which subsequently results in the loss of their existing populations. Many medicinal plant species are used in curing more than one disease and as a result, these species are under pressure due to over collection from wild. For example,

*Hamidesmus indicus* is used to cure 34 types of diseases, *Aegle marmelos* 31, *Phyllanthus emblica* 29 and *Gloriosa superba* 28 diseases. Over exploitation and continuous depletion of medicinal plants have not only affected their supply and loss of genetic diversity, but have seriously affected the livelihood of indigenous people living in the forest margins. The primary threats to medicinal plants are those that effect any kind of biodiversity used by humans (Rao et al., 2004; Sundriyal and Sharma, 1995). There are many other paternal causes of rarity in medicinal plant species, such as habitat specificity, narrow range of distribution, land use disturbances, introduction of non-natives, habitat alteration, climatic changes, explosion of human population, fragmentation and degradation of population bottleneck and genetic drift. Additionally, natural enemies (i.e. pathogens, herbivores, and seed predators) could substantially limit the abundance of rare medicinal plant species in any given area (Bevillet et al., 1999; Dhyani and Kala, 2005).

Some studies have been undertaken from time to time to document the traditional knowledge of medicinal plant in the state of Jammu and Kashmir (India) in general and Kashmir valley in particular (Abrol and Chopra, 1992; Gohil and Quardi, 1992; Raven, 1998; Ballabh et al., 2008; Kumar et al., 2009; Tantray et al., 2009; Balsev et al., 2010; Rakesh et al., 2010; Kunwar et al., 2010; Kumar & Hamal, 2011; Jima and Megersa, 2018). In the Anantnag District with its many remote areas present day medicare facilities are lacking and people generally depend on indigenous traditional plant based medicare system. The District has not been explored for ethno medicinal plants yet, Therefore the present study was carried out: (i) to enlist ethno medicinal plants used in the area for treating different human ailments; (ii) to document the traditional knowledge of medicinal plants in

the area; and (iii) to explore the possibility to find new uses of plants growing in the area.

2. Materials and Methods

Study area

The study area falls under south Kashmir of Anantnag District. The district lies between 33° -20' to 34° -15' North latitude and 74° -30' to 75° -35' East Longitudes. Anantnag district is covered with thick forests and mountains. Nature has bestowed the district with mountains, hills and forests. About 58% of the geographical area of the district is under forests. The forests provide most suitable environment for wild life. The forests of Deodar, Fir and Pine etc. provide the best quality of the timber. Chinar tree is an integral part of Kashmiri culture. Trees of the district form one of its greatest charms. The delightful trees, the magnificence walnuts, the endless willows, the poplars and the elms, the countless orchards of apples, pears and apricots give the district of Kashmir valley, the appearance of a wellwooded park. Anantnag district spreads over an area of 2,856 km<sup>2</sup> (Table 1). The district is predominantly very fertile and rural. Maximum knowledge of medicinal plants was available with elder men and women. The young generation was found to be totally ignorant of the traditional plant use for human medicare in view of dwindling of the traditional practice of use of plants in medicare system, it is suggested that local communities should get education about indigenous medicare practice and indigenous medicinal plant diversity.

Study sites

Four tehsils (administrative divisions) of Anantnag district were included in this study, namely; Dooru, Kokernag, Bijbehara and Pahalgam were selected based on maximum number of medicinal plant species in those areas. Ten villages from each tehsil were selected randomly. It has been ensured that these representative villages would represent all characteristics of the whole district because of high diversity of medicinal plants (Figure 1). Table 1: Summary of demography of the Anantnag District during 2011 census.

Item	Unit
Area	2856sq.km
Population:	
Population (2011 Census)	
• Total population	1,070,144 persons
• Male	5,52,404
• Female	5,17,740
• Population Growth	37.48%
• Area (Sq.km)	2856
• Density / Sq. Km	375
• Proportion to J&K population	8.53%
• Sex Ratio/1000	937
* Child Sex Ratio (0-6 Age)	831
* Average literacy	64.32
* Male Literacy	74.13
* Female Literacy	54.15
* Total Child population (0-6 age)	2,06,338
* Male population (0-6 age)	1,12,661
* Female Population (0-6 age)	93,677
* Literates	5,55,608

* Male literates	3,25,964
* Female literates	2,29,644

3. Field Survey and Data Collection

Field survey

Equal representation was given to each of the 10 villages and a total of 75% families from selected villages were interviewed randomly and the remaining 25% families were selected based on their traditional knowledge in medicinal plants. The areas/sites were visited regularly after 15 days for a period of six months from December to June, 2011. The major ethnic group of Gujjars and Bakerwalas were involved in the survey.



Figure: (A) Map of India



Figure (B) Map of Jammu and Kashmir

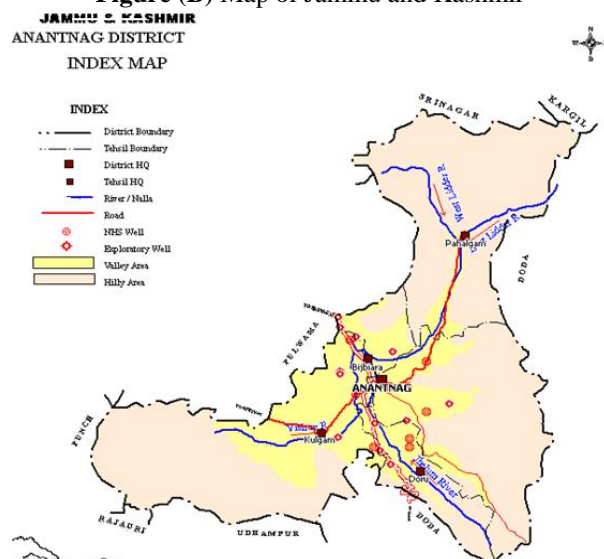


Figure (C): Map of Anantnag District (J&K)

Figure 1: Showing map of Jammu and Kashmir including different study sites in Anantnag District, India

### Ethical considerations

Before beginning the survey, the legal representatives of the selected areas were contacted and informed of the objectives of the research work. A meeting was then held with a majority of the adult inhabitants (above 20 years) from the villages (selected areas), during which they are acquainted with the objectives of the research work. We have obtained consent from the head of each village before starting the Questionre process during interview. Six hundred individuals between the age of 20 and 79 years including 200 individuals in each group, young (20-35 years), middle aged (36-60 years) and elders (60 +) were interviewed. Informal meetings sometimes less planned and regulated than formal meetings were held in villages while staying with them in the village. The traditional healers and women representing major the two ethnic groups (Gujjars and Bakerwalas), castes and occupations were encouraged to participate. Among the respondents, 5% were traditional healers, 15% ethnic groups and 20% local women. While the remaining 85 % belongs to the local people who belongs to that area.No ethical clearance was sought and obtained from the University because we blong to that area and people are known to us.

### Data collection

Data was collected using a semi-structured questionnaire. The questionnaire was designed to capture information on the local name, local uses, parts used, time of collection processing and method of recipe preparation as in use in the local community. At the end of each interview session, a guided tour was undertaken with the interviewer in order to collect the plants cited during the interview.

Plant specimens were collected and identified with the help of available literature and specimens at Kashmir University, Herberium.. The voucher plantspecimens were deposited in the KASHherbarium.

### Data analysis

Data obtained from the questionnaire was analysed by means of Ethno botanical Knowledge Index (EKI).

## 4. Results

During the field survey 64 medicinal plants have been recorded representing 59 genera and 40 families. Out of which, 44 species are herbs, 09 species are shrubs, 07 species are trees and 03 species are climbers (Table 2). Maximum number of plants species belong to the family Asteraceae (10 species), followed by Lamiaceae (9 species), Plantaginaceae and Rosaceae (3 species each), Fabaceae, Polygonacea, Solanaceae, Cucurbitaceae, and Araceae (Two species each) and the remaining 29 families contain one species each. All these investigated medicinal plants are being used to cure about 48 different types of human ailments (Tables2 &3). The most common ailments for which these plants are being used are asthma, diarrhea and dysentery, wound healing, cold, cough, fever and stomach problems. 12 species are being used to cure asthma, 10 species for diarrhea and dysentery, 12 species for wound healing, 13 species for fever, 10 species for cold, cough and bronchitis and 9 species for stomach disorders / problems (Table 3). Some species have been reported to cure only one type of disease but majority of the species cured more than one disease. The plants parts used for the treatments are roots, leaves, fruits, seeds, bark, rhizomes, flowers, whole plant. Most commonly used parts are leaves, roots or whole plants because a maximum number of plants belong to herbs.

The methods of preparation fall into four categories: (i) paste, (ii) juice extracted from various plant parts, (iii) decoction of plant parts mixed with water and other liquids and (iv) powder made from different plant parts. In some areas under study only one part is being utilized for treatment, but in most of the cases multiple parts are used. Medicines are taken orally directly or mixed with water, milk, honey, ghee, ginger, cinnamon etc. As observed during the present study most of the medicines are administered twice a day in morning and evening time for a period of 7 to 21 days in most of the cases. Doses are measured generally in teaspoonful or in milliliter (ml) which varies from patient to patient depending on their age, physical health conditions and other factors.

**Table 2:** List of the medicinal plants used by local communities of the southern part of Kashmir, their habit, local name, parts used and disease treated.

S.No	Family/Species	Local name	Habit	Part used	Indications
1	<b>Asteraceae</b> <i>Calendula officinalis</i> Linn	Hamesh	Annual herb	Leaves and	Wound healing, skin diseases, ulcers and inflammation, burns, eye problems.
2	<b>Asteraceae</b> <i>Anthemiscotula</i> Linn	Bahar Fuckgass	Annual herb	flowers Whole plant	rheumatism, asthma, colds.
3	<b>Asteraceae</b> <i>Artemisia maritima</i> Linn	Mein	perennial shrub	Leaves	Stomach pain, abdominal pain, fever, vermifuge
4	<b>Asteraceae</b> <i>Helianthus annus</i> Linn	Gullaftab	Annual herb	Flowers and seeds	problems, diuretic, wounds
5	<b>Asteraceae</b> <i>Sontolinachamaecyparissus</i> Linn	Centkul	perennial shrub	Leaves and flowering tops	poor digestion, vermifuge
6	<b>Asteraceae</b> <i>Saussureacostus</i> (Falc.) Lipchitz	Kuth	Annual herb	Root stock	gh, asthma, joint pain
7	<b>Asteraceae</b> <i>Achillea millefolium</i> Linn	Pehalgass	perennial herb	leaves	Ulcers, kidney disorders, nasal bleeding, piles, heart burns, fevers and cold, wounds.
8	<b>Asteraceae</b> <i>Taraxacum officinalis</i> F.H.Wigg	Madan hand	Herbaceous perennial plant	Whole plant	Chronic cough, stomach pain, internal ulcer, abdominal swelling, liver disorder, acidity, jaundice, urine, irritation
9	<b>Asteraceae</b>	Teethwan	Perennial herb	Whole plant	Abdominal pain, chronic fever, stomach

	<i>Artemisia absinthium</i> Linn				disorder, blood circulation
10	<b>Asteraceae</b> <i>Jurineadolomiaca</i> Boss	Dupefth	perennial herb	Roots	Fever, eruptions, back pain, rheumatism, stomachic.
11	<b>Apiaceae</b> <i>Foeniculumvulgare</i> Mill	Bodian	perennial herb	Seeds	Chest disease, diuretic, spleen and kidney, constipation
12	<b>Caprifoliaceae</b> <i>Viburnum grandiflorum</i> Wall. ex Dc	Kulmach	Deciduous precocious shrub	leaves and fruits	Blood purifier, menstrual flow, diuretic, liver protection, antispasmodic
13	<b>Crassulaceae</b> <i>Sedum ewersii</i> Leden.	Saemkul	Low-growing perennial herb	leaves	Diarrhea, hemorrhages, kidney problems, piles
14	<b>Araceae</b> <i>Arisaemapropinquum</i> Schott	Cobra plant	perennial wild herb	Roots	Boils, wounds, cuts, burns.
15	<b>Araceae</b> <i>Acoruscalamus</i> linn	Vai	Semi aquatic perennial herb	Rhizome	Stomach pain, diarrhea, fever, rheumatism, liver and kidney trouble, asthma, insecticide
16	<b>Berberidaceae</b> <i>Berberislycium</i> Royle	Kawdush	Annual Shrub	Bark of roots	Jaundices, back pains, fractures
17	<b>Vitaceae</b> <i>Vitisvinifera</i> Linn	Daech	Perennial and deciduous tendril climber	Fruit, flower and leaves	Jaundice, vomiting, arthritis, burning sensation, anaemie
18	<b>Lamiaceae</b> <i>Menthalongifolia</i> (L)Huds	Janglifootna	Aromatic perennial herb	Flower and leaves	Fever, asthma, headaches, indigestion
19	<b>Lamiaceae</b> <i>Lavendulaofficinalis</i> Chaix.exvill.	Lavender	Perennial shrub	Flower and leaves	Blood pressure, headache, rheumatism, pineal pain.
20	<b>Lamiaceae</b> <i>Ocimumbasilicum</i> Linn	Baber	Annual herb	Whole plant	Fever, Antimicrobial, Promote menstrual flow
21	<b>Lamiaceae</b> <i>Prunella Vulgaris</i> Linn	Kalyot	Perennial herb	Flower and leaves	Diahorrea, fevers, internal bleeding, weakness of heart (slow heart beat) and liver, wound healing , eye vision
22	<b>Lamiaceae</b> <i>Menthapiperata</i> Linn	VellFootna	Perennial herb	Rhizome and leaves	Loss of appetite, vomiting, mouth wash, tooth infection, Stomach ache
23	<b>Lamiaceae</b> <i>Menthaarvensis</i> Linn	Footna	Perennial herb	Leaves	Asthma, cough, rheumatism, indigestion, diarrhea
24	<b>Lamiaceae</b> <i>Ajugabracteosa</i> wall ex benth.	Jain-e- adam	perennial herb	Whole plant	Blood purifier, fever, rheumatism, abdominal pain, burns, boils.
25	<b>Lamiaceae</b> <i>Thymus linearis</i> Benth.	Janglijavind	Perennial subshrub	Whole plant	Stomachic, antiseptic, weak vision, itching
26	<b>Lamiaceae</b> <i>Nepetacataria</i> Linn	BrareGass	Aromatic, pubescent and perennial herb	Whole plant	High fever, worms, wounds, abdominal pain, dysentery, toothache
27	<b>Dipsacaceae</b> <i>Dipsacusinermis</i> Wallich	Wopalhack	Biannual herbaceous plant	leaves and Roots	Bone fractures, back and leg disorders, blood circulation.
28	<b>Rutaceae</b> <i>Skimmialaureola</i>	Butputer	Evergreen shrub	leaves	Adnominal pain, wormicide
29	<b>Polygonaceae</b> <i>Rumexnepalensis</i> Linn	Hubul	perennial herb	leaves and Roots	Tuberculosis, asthma, skin disease
30	<b>Polygonaceae</b> <i>Rheum emodi</i> wall. ex. Meissn	Pumbe-chalan	Wild perennial herb	Rhizome	Rheumatic pains, wounds, boils
31	<b>Geraniaceae</b> <i>Geranium wallichianum</i> D.don ex Sweet	Rathenjoth	perennial herb	leaves and Roots	Ulcers, toothache, rheumatism, joint pain, cuts and wounds
32	<b>Iridaceae</b> <i>Irisgermanica</i> Wall. ex Lind	Sasoon	perennial herb	Rhizome	Rheumatic pain, expectorant, swelling in throat
33	<b>Violaceae</b> <i>Viola odorata</i> Linn	Bunfsha	Wild perennial herb	Flowers and leaves	Cold, cough, throat, infection or swelling, chest involvement
34	<b>Urticaceae</b> <i>Urticadioica</i> Linn	Soi	Herbaceous Perennial Plant	Whole plant	Fever, fractures, stomach pain, wounds, dandruff, skin infection, nose bleeding
35	<b>Cannabinaceae</b> <i>Cannabis saltiva</i> Linn	Charis	Annual herb or under shrub	Whole plant	Diarrhea, cholera, rheumatism, wormicide, skin disease, narcotic
36	<b>Solanaceae</b> <i>Daturastramonium</i> linn	Datur	Annual herb	Whole plant	Toothache, asthma and hair fall
37	<b>Solanaceae</b> <i>Hyoscyamusniger</i> Linn	Bazarbang	Biannual herb	Seeds and leaves	Asthma, toothache, body pain, fever
38	<b>Podophyllaceae</b> <i>Podophyllumhexandrum</i> Royle.	Wanwagun	Perennial herb	Whole plant	Skin diseases, heart problems, tumors and cancer
39	<b>Rosaceae</b> <i>Rosa damascene</i> Mill	Kashurghulab	Deciduous shrub	Flowers	Cough, cold, asthma, bronchitis, hypertension, headache.
40	<b>Rosaceae</b> <i>Prunuspersica</i> Linn.	Chenun	Perennial tree	Leaves and fruits	Wounds, insecticidal, blood purifier, body ache
41	<b>Rosaceae</b> <i>Cydoniaoblonga</i> Mill.	Bumchoonth	Perennial tree	Fruit	Asthma and cough

42	<b>Taxaceae.</b> <i>Taxus wallichiana</i> Zucc.	Postil	Evergreen tree	Bark and seeds	Asthma, bronchitis, breast and lung cancer
43	<b>Plantaginaceae</b> <i>Digitalis Lanata</i> Ehrhart	Tiliposh	Biannual herb	Leaves	Wounds and burns, heart failure, asthma
44	<b>Plantaginaceae</b> <i>Plantagolanceolata</i> Linn	Gull	Perennial herb	Whole plant	Eye infection, rheumatic pains, asthma, wounds, inflammation of mouth and throat
45	<b>Plantaginaceae</b> <i>Plantago major</i> Linn	Budgull	Perennial herb	Whole plant	Fever, dysentery, back pain, rheumatism, cough
46	<b>Phytolaccaceae</b> <i>Phytolacca acinosa</i> Roxb	Padderhakh	Perennial herb	Root and Fruit	Stomach cramps, wounds, rheumatic pains, breast disorders
47	<b>Cucurbitaceae</b> <i>Cucumis sativa</i> Linn	Laerd	Annual creeper	Leaves and fruits	Bowels, Jaundice, Dehydration, Mental stress, Burns, Skin problems.
48	<b>Cucurbitaceae</b> <i>Lagenaria Siceraria</i> (Mol.) Standl	Kasher Aull	Annual Climber	Leaves and fruits	Headache, acidity, ulcers, boils, diabetes mellitus
49	<b>Liliaceae</b> <i>Allium sativum</i> Linn	Ruhoon	Perennial herb	Bulb and Leaves	Diabetes, heart attack, wound healing, antibacterial agent, Joint pains, hypertension
50	<b>Asparagaceae</b> <i>Asparagus officinalis</i> Linn	Maesskul	Perennial herb	Root	Urinary infection, cough, kidney stone, mental stress
51	<b>Baraginaceae</b> <i>Arnebiabenthami</i> Wallich. ex. G. Don. Johnst.	Kahzaban	Perennial herb	Leaves	Cough and fever, disease of throat, tongue and heart, asthma
52	<b>Scrofulariaceae</b> <i>Picrorhiza kurroa</i> Royle ex. Benth	Koud	Perennial herb	Leaves and Rhizome	Liver disorder, indigestion, stomach problems
53	<b>Fabaceae</b> <i>Lupinus polyphyllus</i> Lindley	Turm	Perennial herb	Seeds	Wormicide, diuretic, high fever, menstrual abnormalities
54	<b>Fabaceae</b> <i>Robiniapseudoacacia</i> Linn	Keker	Annual tree	Leaves and flowers	Wounds, Digestive disorders, Acidity
55	<b>Dioscoreaceae</b> <i>Dioscorea deltoidea</i> wall. ex Griseb.	Krich	Perennial climber	Rhizome	Round worms, asthma, constipation, arthritis.
56	<b>Saxifragaceae</b> <i>Bergenia ciliata</i> (Haw.) Sternb.	Zakhmi Hayat	Perennial herb	Rhizome, leaves	Wounds, headache, diarrhoea, asthma, cough, fever, dysentery
57	<b>Paeoniaceae</b> <i>Paeonia emodi</i> wall. ex. Royle	Mydh	Perennial herb	Rhizome	Blood purifier, Intestinal Infection, kidney Stone
58	<b>Malvaceae</b> <i>Malva neglecta</i> wallr	Sochal	Annual herb	Whole plant	Wounds, stomach cramps, indigestion, acidity
59	<b>Juglandaceae</b> <i>Juglans regia</i> Linn	Dunn	Annual tree	Whole plant	Menstrual problems, toothache, wound infections
60	<b>Moraceae</b> <i>Ficus carica</i> Linn	Anjeer	Small annual tree or large deciduous shrub	Fruit and latex	Expectorant, urine problem, blood purifier, laxative
61	<b>Protulacaceae</b> <i>Protulacaoleraceae</i> Linn	Nuneer	Annual herb	Whole plant	Ulcer, liver, heart, kidney and bladder disorders
62	<b>Papaveraceae</b> <i>Papaver somniferum</i> Linn	Khashkhash	Annual herb	Fruits and seeds	Asthma and T.B
63	<b>Valerianaceae</b> <i>Valeriana wallichi</i> DC	Mushkebala	Perennial herb	Root	Headache, wounds, Hypertension, Scorpion sting
64	<b>Pinaceae</b> <i>Cedrus deodara</i> Loudon	Deodar	Evergreen tree	Bark, leaves, heart wood	Ulcers, Leprosy, Tuberculosis, Skin eruptions, Headache

Table 3: List of Ethnobotanical plants for treatment of 48 human ailments

S. No.	Name of disease	Plants used
1.	Stomach disorder	<i>Mentha arvensis</i> , <i>Bergenia ciliata</i> , <i>Prunella vulgaris</i> , <i>Nepeta cataria</i> , <i>Acorus calamus</i> , <i>Cannabis sativa</i> , <i>Sedum ewersii</i> , <i>Podophyllum hexandrum</i> , <i>Phytolacca acinosa</i> , <i>Plantago major</i> .
2.	a) Diarrhoea, Dysentery	<i>Picrorhiza kurroa</i> , <i>Malva neglecta</i> , <i>Mentha piperata</i> , <i>Taraxacum officinale</i> , <i>Artemisia absinthium</i> , <i>Thymus linearis</i> , <i>Phytolacca acinosa</i> , <i>Jurinea dolomiaca</i> , <i>Urtica dioica</i> .
3.	b) Stomach-ache (stomach problems)	<i>Achillea millefolium</i> , <i>Sedum ewersii</i> .
4.	c) Piles	<i>Ficus carica</i>
5.	d) Laxative	<i>Cannabis sativa</i>
6.	e) Cholera	<i>Mentha arvensis</i> , <i>Picrorhiza kurroa</i> , <i>Malva neglecta</i> , <i>Santolinachamaecyparissus</i> .
7.	f) Indigestion	<i>Mentha arvensis</i> , <i>Artemisia absinthium</i> , <i>Malva neglecta</i> , <i>Taraxacum officinale</i> , <i>Protulacaoleraceae</i> , <i>Anthemiscotula</i> , <i>Achillea millefolium</i> , <i>Saussurea costus</i> , <i>Asparagus officinalis</i> , <i>Plantago major</i> , <i>Cydonia oblonga</i> .
8.	Cold, Cough, Bronchitis	<i>Hyoscyamus niger</i> , <i>Mentha longifolia</i> , <i>Rumex nepalensis</i> , <i>Anthemiscotula</i> , <i>Cedrus deodara</i> , <i>Datura stramonium</i> , <i>Saussurea costus</i> , <i>Taxus wallichiana</i> , <i>Digitalis lanata</i> , <i>Dioscorea deltoidea</i> , <i>Papaver somniferum</i> , <i>Cydonia oblonga</i> .
9.	Asthma	<i>Arnebiabenthami</i> , <i>Artemisia maritima</i> , <i>Artemisia absinthium</i> , <i>Hyoscyamus niger</i> , <i>Prunella vulgaris</i> , <i>Mentha longifolia</i> , <i>Nepeta cataria</i> , <i>Viola odorata</i> , <i>Urtica dioica</i> , <i>Acorus calamus</i> , <i>Anthemiscotula</i> , <i>Achillea millefolium</i> , <i>Plantago major</i> , <i>Ajugabraceosa</i> , <i>Ocimum basilicum</i> .
10.	Fever	<i>Rumex nepalensis</i> , <i>Cedrus deodara</i> , <i>Papaver somniferum</i> .
10.	Tuberculosis	

11.	Diabetes	<i>Allium sativum, Lagenariasiceraria.</i>
12.	Obesity	<i>Lagenariasiceraria</i>
13.	Hypertension	<i>Cucumis sativa, Allium sativum, Valerianawallichi.</i>
14.	Rheumatism, (Rheumatic pains)	<i>Menthaarvensis, Rheum emodi, Jurineadolomiaca, Geranium wallichianum, Iris germanica, Cannabis sativa, Anthemiscotula, Lavendulaofficinalis, Phytolaccaacinoso, Plantagolanceolata, Plantago major.</i>
15.	Blood purifier (Blood purification)	<i>Taraxacumofficinalis, Ficuscarica, Ajugabracteosa, Paeoniaemodi.</i>
16.	Boils	<i>Rheum emodi, Arisaemapropinquum, Ajugabracteosa.</i>
17.	Headache	<i>Bergeniaciliata, Lagenariasiceraria, Menthalongifolia, Lavendulaofficinalis, Valerianawellichi.</i>
18.	Diuretic	<i>Foeniculumvulgare, Viburnum grandiflorum, Ocimumbasilicum, Anthemiscotula.</i>
19.	Kidney Problems (Kidney stone)	<i>Paeoniaemodi, Foeniculumvulgare, Acoruscalamus, Sedum ewersii, Asparagus officinalis.</i>
20.	Blood Circulation	<i>Dipsacusinermis.</i>
21.	Skin Diseases.	<i>Juglansregia, Jurineadolomiaca, Rumexnepalensis, Urticadioica, Cannabis sativa, Vitisvinifera, Cedrusdeodara,</i>
22.	Abdominal Pain	<i>Artemisia maritima, Taraxacumofficinalis, Artemisia absinthium, Nepetacataria, Ajugabracteosa.</i>
23.	Acidity	<i>Bergeniaciliata, Malvaneglecta, Lagenariasiceraria.</i>
24.	Constipation	<i>Dioscoreadeltoidea.</i>
25.	Insect Sting	<i>Anthemiscotula.</i>
26.	Wound healing	<i>Rheum emodi, Juglansregia, Prunella vulgaris, Geranium wallichianum, Urticadioica, Calendula officinalis, Achilleamillefolium, Arisaemapropinquum, Digitalis lanata, Phytolaccaacinoso, Cucumis sativa, Allium sativum, Plantagolanceolata, Helianthus annus, Valerianawallichi.</i>
27.	Toothache	<i>Menthapiperata, Hyoscymusniger, Juglansregia, Nepetacataria, Geranium wallichianum, Daturastramonium.</i>
28.	Burns	<i>Calendula officinals, Arisaemapropinquum, Digitalis lanata, Cucumis sativa, Ajugabracteosa.</i>
29.	Dandruff, Hair falling	<i>Urticadioica, Daturastramonium.</i>
30.	Vision problems (eye defects)	<i>Helianthus annus, Thymus linearis.</i>
31.	Throat and Tongue disease	<i>Arnebiabenthamii, Iris germanica, Plantagolanceolata.</i>
32.	Breast and Lung Cancer	<i>Taxuswallichiana.</i>
33.	Ovarian cancer	<i>Podophyllumhexandrum.</i>
34.	Heart problems (Heart attack) Heart burns etc)	<i>Allium sativum, Digitalis lanata, Podophyllumhexandrum, Prunella vulgaris, Protulacaoleraceae.</i>
35.	Menstrual problems	<i>Ocimumbasilicum, Santolinachamaecyparissus, Juglansregia.</i>
36.	Jaundice	<i>Berberis lyceum, Vitisvinifera, Cucumis sativa.</i>
37.	Ulcers	<i>Geranium wallichianum, Calendula officinalis, Achilleamillefolium, Daturastramonium.</i>
38.	Ear ache	<i>Protulacaoleracea, Bergenia ciliate.</i>
39.	Liver Problems	<i>Picrorhizakurrooa, Taraxacumofficinalis, Protulacaoleracera, Viburnum grandiflorum, Acoruscalamus.</i>
40.	Vermifuge, wormicide,	<i>Artemisia maritima, Foeniculumvulgare, Cannabis sativa, Santolinachamaecyparissus, Prunuspersica, Skimmialaureola.</i>
41.	Chest complaints	<i>Foeniculumvulgare, Althea rosa.</i>
42.	Joint pain	<i>Geranium wallichianum, Saussureacostus.</i>
43.	Back pain	<i>Hyoscymusniger, Jurineadolomiacea, Berberis lyceum, Plantago major.</i>
44.	Urinary Problems	<i>Digitalis lanata, Cucumis sativa.</i>
45.	Antibacterial	<i>Prunella vulgaris, Allium sativum, Ocimumbasilicum.</i>
46.	Vomiting	<i>Menthapiperata, Vitisvinifera.</i>
47.	Expectorant	<i>Ficuscarica, Iris germanica.</i>
48.	Scorpion Sting	<i>Valerianawallichi.</i>

## 5. Discussion

Medicinal plants have been used in healthcare since time immemorial. Studies have been carried out globally to verify their efficacy and some of the findings have led to the production of plant-based medicines. Among various classes of traditional uses, all across the globe, various types of stomach disorders, cold, cough and bronchitis are predominant and a sizeable number of plants species have been discovered to cure such illness across different ethnic communities (Singh & Hajra, 1996). The finding of the present study are in conformity with the results of Malik et al. (2011) who documented same plants in his list of 80 medicinal plant species distributed to 43 families and 72 genera in tribal area of North Kashmir being traditionally

used for the treatment of different human ailments like headache, diarrhea, chronic fever, stomach pain, dysentery and asthma. Our results also corroborate the results of Rakeshet al. (2010) who documented some traditionally used medicinal plants used to treat gynecological disorder and other ailments by the tribal people of Madhya Pradesh. The observation of the present study indicates that herbal plants find a vast scope in traditionally used medicines as majority of the documented medicinal plants (46) belongs to the herbs. Kunwaret al.(2010) also reported 48 species of herbal medicinal plants from 46 genera and 40 families used for the treatment of various diseases in far-West Nepal where herbal medicines is only primary means of health care. Present study revealed that most abundant life forms of ethanomedicinal plants in Anantnag district are herbs and

shrubs. These results are in agreement with the results of Jima and Megersa, (2018) reported the most abundant life forms of medicinal plants in the south east Ethiopia were shrubs followed by and herbs.

## 6. Conclusion

The present study revealed that only few species of medicinal plants were generally known to common people while as large number of species was completely unknown to them. The maximum knowledge of medicinal plants was available with elder men and women. The young generation was found to be totally ignorant of the use of plants for medicare and for treatment of different ailments. Therefore, it is suggested that local communities should get education about indigenous medicinal plant diversity. Major steps should be taken for conservation and sustainable use of great wealth of medicinal plants. Most of the species of medicinal plants have multiple uses. They are invariably being used for curing various diseases and for earning livelihood. Over grazing and grass trampling has caused habitat destruction for most of these plants and their frequency of occurrence has tremendously decreased. It, therefore, becomes imperative to (i) manage the grazing system and encourage the regeneration of medicinal plants or else these medicinal plants will disappear and posteriority will have to suffer, (ii) promote this education in young generations and (iii) preserve and document the traditional Knowledge and to undertake photochemical studies to verify scientific basis of traditional system of practice of herbal medicare, such a study shall surely help in discovery of new drugs that will be very potent to relieve human sickness and make life comfortable.

## 7. Acknowledgement

We thank faculty members of Department of Botany, Bundelkhand University, Jhansi for their support throughout the work.

**Conflict of interest:** The authors declare that they have no conflict of interest.

## References

- [1] Abrol BL, Chopra IC(1992). Some vegetable drug resources of Ladakh. *Current Science*, 31:324-325. Alagesaboopathi S(2011). Ethnomedicinal plants used as medicine by the KurumbaDharmapuri District of Tamil Nadu, India. *Asian J. Exp. Boil. Sci.*, 2(1):140-142.
- [2] Ballabh B, Chuarasia OP, Ahmad Z, Singh SB(2008). Traditional medicinal plants of cold desert Ladakh-Used against kidney and urinary disorders. *Journal of Ethnopharmacology*, 118(2):331-339.
- [3] Balsev H, Knudsen TR, Byg A, Kronborg M, Grandez C(2010). Traditional use and management of *Aphandranutalia* (Arecaceae) in Amazonian Peru. *Economic Botany*, 64(1):55- 67.
- [4] Beville RL, Louda SM, Stanforth LM (1999). Protection from natural enemies in meaning rare plant species. *Conservation Biology*, 13:1323-1331.
- [5] Dhyani PP, Kala CP(2005). Current research on medicinal plants: Five Lesser known but valuable aspects. *Current Science*, 88:335. Ganie KA, Astam K, Nawchoo IA(2010). Development of Agro-technology for the cultivation and conservation of *Arnebiabenthamii*- A critically endangered medicinal plants of North West Himalaya. *Journal of American science*, 6(10):1133.
- [6] Gohil PN, Quardi MA (1992). Ethnobotany of Kargil-medicinal plants used by balti, dard, bokpa races. *Journal of economic and taxonomic botany additional series*, 10:301-306.
- [7] Jima TT, Megersa M(2018). Ethnomedicinal value of plants in Tiruchengode area of Namakkal district, Tamil Nadu, India. *Journal of Medicinal Plants Studies*, 6(1):257-260.
- [8] Kumar M, Paul Y, Anand VK(2009). An Ethnobotanical Study of Medicinal plants used by the locals in Kishtwar, Jammu and Kashmir, India. *Ethnobotanical leaflets*, 13:1240-56.
- [9] Kumar S, Hamal IA(2011). Herbal remedies used against arthritis in Kishtwar High altitude National park. *Indian journal of traditional knowledge*, 10 (2): 358-36.
- [10] Kunwar RM, Shrestha KP, Bussmann RW(2010). Traditional herbal medicine in for-West Nepal: A Pharmacological appraisal. *Journal of Ethnobiology and Ethnomedicine*, 6:35.
- [11] Malik AH, Khuroo AA, Khan ZS(2011). Ethnomedicinal uses of some plants in the Kashmir Himalaya. *Indian journal of traditional knowledge*, 10(2): 362-366.
- [12] Rakesh T, Dwivedi SN, sumeet D (2010). Ethnomedicinal plants used to treat gynecological disorders by tribal people of M.P, India. *International Journal of Pharmacy and life science*, 1(3): 160-169.
- [13] Rao MR, Palada MC, Becker BN(2004). Medicinal and aromatic plants in Agroforestry systems. *Journal of Ethnobiology and Ethnomedicine*, 61:107-122.
- [14] Raven PH(1998). Medicinal plants and global sustainability: the canary in the coal mine. In medicinal plants: a global heritage, proceedings of the international conference on medicinal plants for survival. New Delhi; International development research center, 14-18.
- [15] Samant SS, Dhar U, Palni LMS (1998). Medicinal plants of Indian Himalaya: diversity, distribution and potential values. *G.B. Plant institute of Himalayan*, India. 163.
- [16] Singh DK, Hajra PK(1996). Floristic Diversity. In Biodiversity status in the Himalaya. New Delhi: British Council, 23-38.
- [17] Sundriyal RC, Sharma E(1995). Cultivation of medicinal plants and orchids in Sikkim Himalaya. Almora: *G.B. Plant Institute of Himalayan Environment and Development*.
- [18] Tantray MA, Tariq KA, Mir MM, Ayoobhat M, Shwla AS(2009). Ethnobotanical survey of Shopian, Jammu and Kashmir State, India. *Asian Journal of traditional medicine*, 4 (1).