

Indigenous Ethno-medical Practices of Jahu Valley Region of Himachal Pradesh, India

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ABSTRACT: Plants are the basis of life and play a vital role in our livelihood. A present study was carried out in nine villages surrounding the Jahu valley region of Himachal Pradesh to enumerate medicinal plant species used to cure different kinds of ailments. The people of these areas have a great traditional knowledge about the local plants used for the treatment of various diseases. An ethno botanical survey was undertaken in study area to collect information related to medicinal plants for the treatment of various diseases. The information was obtained through questionnaire, face to face interviews of the herbal experts 'Vaidyas' and local inhabitants. The study reveals that many people of this region depend upon the local plants for their primary health care. This study also reveals that several medicinal plants are decline in number due to destruction of their habitats, unscientific collection of plants and poor post harvest methods. Hence, there is a need of conservation of local ethno-medicinal plants in order to use the traditional knowledge for future generations.

Keywords: Ethno-medicinal; ailments; traditional; Vaidyas

INTRODUCTION

Himalayas are rich with medicinal flora and ethno-medicinal knowledge. The western Himalayas contain about 50% medicinal plants mentioned in British pharmacopoeia.^[1] About 60% of the world population depends upon the traditional medicine for their primary health needs.^[2] Himachal Pradesh is one of the Himalayan states of India, which is rich of ethno-medicinal flora.^[3] Medicinal plants defined as groups of plants that possess some special properties that qualify them as ingredient of drugs and therapeutic agents, and, are used for medicinal purposes. The indigenous knowledge has been evolved from the variety of the ecosystem in different part of the world.^[4] Due to changing perception of the user communities and socio economic transformation all over the world the indigenous knowledge on sustainable use of resources has degrade severally, and needs to be documented before it get lost for the use of future generation.^[5] Traditional herbal medicine used by different communities play an important role in curing different ailments. They are safe, effective and inexpensive. The Jahu valley touches the boundary of district Hamirpur, Bilaspur and Mandi in lower foot hill region of Himalaya. Medicinal plants are collected from the forests, grasslands and agriculture land. Medicinal plants are collected from these different sources are used for curing various ailments. Medicinal plants are the backbone of traditional medicine being used over the world. The knowledge acquired by a few local people, descended down from generation to generation still forms the traditional practices of herbal cure.^[6] The indigenous people have direct dependence on the ethno botanical plants for their sustainability. The knowledge about ethno botanical plant used as food, vegetables and

medicine has been handed from generation to generation. Today the knowledge of ethno botanical plants is vanishing due to changing social values and participation of younger generation in conservation of traditional knowledge. The main goal of this study is to explore the traditional knowledge and to create awareness among younger generations for the use.

MATERIAL NAD METHODS

Study Area: the extensive survey was conducted in the nine villages of Jahu valley region i.e. Bahanwin, Bhalwani, Samakari villages of Hamirpur district, Pounta, Batail, Mohi villages of Mandi district and Hatwar, Kulwari, Pantehra villages of Bilaspur district respectively.

The climate in the study areas can be divided into three distinct season cool and relatively dry winter(November to March), warm and dry summer (April to June), and rainy (July to September). Temperature ranges between 3 to 43 ° C. The socio-economics of the Jahu valley region is very diverse. The local people of the study areas have a great knowledge about the traditional uses of the plants in curing various ailments. It offers tremendous scope to study indigenous traditional knowledge.^[7] An ethno botanical survey was undertaken in study area to collect information related to medicinal plants for the treatment of various diseases. The information was obtained through questionnaire, face to face interviews of the herbal experts 'Vaidyass' and local inhabitants. The specimen was identifying by using regional flora and monographic works.^{[8], [9], [10], [11], [12], [13]}



Figure 1: Map of Himachal Pradesh, India (representing Jahu Valley region bordering three districts Hamirpur, Bilaspur and Mandi of HP)

RESULTS AND DISCUSSION

A total of 34 species of ethno-medicinal plants belonging to 22 families has been identified (Table 1). Among the families, maximum species were represented by

Moraceae and Rutaceae (4 spp.) followed by Euphorbiaceae (3 spp.) (figure1). Whereas, Anacardiaceae, Cesalpiniaceae, Combretaceae, Lamiaceae, Solanaceae families contribute two plant species each followed by Acanthaceae, Amaranthaceae, Asparagaceae, Berberidaceae, Cannabaceae, Caricaceae, Cuscutaceae, Menispermaceae, Mimosaceae, Myrtaceae, Papilionaceae, Poaceae, Rosaceae, Verbenaceae families contribute 1 plant species. [14], [15], [16], [17],[18]

CONCLUSIONS

The study has shown that Jahu valley region is a rich medicinal flora. The local people of the study area have a great indigenous knowledge on medicinal plants. Most of the herbal medicines are used in the form of powder, paste, decoction and extract. Some herbal plants are used for the treatment of more than one disease. This study also decline that some traditional plants like *Terminalia bellerica*, *Terminalia chebula*, *Pisticia integerrima* and *Cascuta reflexa* get reduce in number due to destruction of habitats, unscientific collections and lack of knowledge. Documentation, preservation and recording of medicinally important plant species and traditional knowledge associated with use of local plant species should be the necessary step for the conservation of plant species and traditional knowledge associated with them for future generation.

Table 1: Ethno-medicinal uses of plants

Sr. No.	Botanical Name & Family	Vernacular Name	Life Form	Status	Part used	Ethno-medicinal uses
Acanthaceae						
1.	<i>Justicia adhatoda</i> Linn.	Basuti	S	C	Whole plant	1. Extract from leaves and roots are useful in treating bronchitis and other lung and bronchiole disorders as well as common cough and colds. 2. A decoction of the leaves has soothing effect on irritation in the throat, and act as expectorant to loosed phlegm in the respiratory passage
Amaranthaceae						
1.	<i>Achyranthes bidentata</i> Linn.	Puthkanda	S	C	Leaves, seeds, roots	1. Root juice is used for the tooth ache. 2. The plant is externally used in treatment of leech bite. 3. Stem is used to cure cough and cold. 4. Leaf paste is used to heal bites of poisonous insects & wasp.

Anacardiaceae						
1.	<i>Mangifera indica</i> Linn.	Aam	T	C	Leaves, bark, fruit, root, seeds	1. Fruits are eaten as kidney tonic and cure headache. 2. Mango root paste is used to reduce fever by applying paste on palms of hand and soles of feet. 3. seeds of mango taken in the dose of 4gms with honey /water thrice a day is used for the diarrhea during pregnancy
2.	<i>Pisticia integerrima</i> Linn.	Kakarsingi	S	Oc	Gall	1. The galls of this herb are effective in treatment of diarrhea & dysentery. 2. The galls with Kaiphala are given with honey used to cure asthma. 3. The herb is good in treatment of fever.
Asparagaceae						
1.	<i>Asparagus adscendens</i> Roxb.	Sanspai	S	C	Leaves, fruits, roots	1. Paste of leaves mixed with raw sugar can cure dysentery. 2. Decoction of leaves powder with one Capsicum powder can relieve in dry cough. 3. Dried powder of fruits and roots are used in increasing lactation after child birth.
Berberidaceae						
1.	<i>Berberis aristata</i> Royle	Kashmalya	S	Oc	Roots, stems, fruits and seeds	1. Roots and lower stems are cooked in water and then used for curing stomach infection, piles, fever, constipation, ulcer, jaundice & eye related problems. 2. Fruits & seeds are anti cancerous, anti inflammatory, Antioxidant & anti diabetic.
Caesalpinaceae						
1.	<i>Bauhinia variegata</i> Linn.	Karyala	T	C	Buds, roots	1. Barks & buds are used for leprosy, ulcers, and skin diseases. 2. Dried buds are used in case of dysentery, piles, diarrhea & for worms.
2.	<i>Cassia fistula</i> Linn.	Amaltas	T	Oc	Fruit, bark, roots, leaves	1. Fruit pulp is consumed to cure constipation. 2. 12-14 gms of leaves in mustard oil is roasted & taken twice a day can cure rheumatism 3. Fruit pulp decoction with ghee is used in curing chronic cough.
Cannabaceae						
1.	<i>Cannabis sativa</i> Linn.	Bhang	H	C	leaves	1. Powder of leaves is given in treatment of diarrhea. 2. Mixture of bhang (120gms) and Black piper corns (7 in numbers) is taken twice a day to get relief from cough and cold.

						3. The paste of leaves is used on cuts, skin ulcers, & insect bites. The dried leaf powder is applied on wounds for faster healing.
Combertaceae						
1.	<i>Terminalia bellerica</i> Roxb.	Bhera	T	Oc	Stem, bark, fruits	1. The fruits are useful in treatment of diarrhea. 2. The fruits are used for the preparation of trifala. 3. Fruits area also used in the treatment of cough, asthma and bronchitis. 4. Mixture of ground stem bark of <i>Bellericmyrobalan</i> and clove along with honey is taken in diarrhea.
2.	<i>Terminalia chebula</i> Retz.	Harad	T	Oc	Fruits	1. Fruit powder is given to lick in intermittent fevers. 2. Fruit powder is used to treat diarrhea, dysentery and bronchial asthma. 3. The powder of fruits is mainly used in constipation, cough, stomach & skin bacterial & fungal infections.
Caricaceae						
1.	<i>Carica papaya</i> Linn.	Papita	T	C	Fruits, leaves	1. Ripe papaya fruits have digestive, carminative & diuretic activities. 2. The juice of leaves can eradicate ring worms. 3. The seeds are effective in bloody diarrhea & urinary infections. 4. The fruit is useful in diabetes, diarrhea.
Cuscutaceae						
1	<i>Cascuta reflexa</i> Roxb.	Amarbel	H	Oc	Whole plant	1. Prepare paste of cascuta mixed with sesame oil can cure air fall. 2. Decoction of amarbel is used to cure constipation & flatulence.
Euphorbiaceae						
1.	<i>Emblica officinalis</i> Gaertn.	Amla	T	C	Fruits, leaves	1. Dried fruits are useful in diarrhea & dysentery. 2. Fruit powder & black salt with water can cure digestive disorders. 3. Neem leaves & amla fruit powder taken daily for one month in case of leprosy & leucoderma.
2.	<i>Mallotus philippensis</i> Arg.	Kambal	T	C	Bark, leaves, fruits	1. The powder of hairs present on the surface of fruit is given in single dose for 2 days in case of intestine infected by roundworm, Giardia, Hookworm 2. Decoction of bark is used for the treatment of rheumatism. 3. Oil prepared from the leaves is

						used in the treatment of cold.
3.	<i>Ricinus communis</i> Linn.	Arand	S	C	Leaves, seeds, roots	1. Roots are used in treatment of swelling, fever, rheumatism, abdominal diseases. 2. Fresh leaves can be used in treatment of jaundice. 3. Latex with Luke warm desi ghee on joints is useful in rheumatic pains.
Lamiaceae						
1.	<i>Ocimum sanctum</i>	Tulsi	H	C	Leaves	The decoction of gloye, tulsi leaves effectively cure fever & strengthens liver. 3 ml of ginger juice with 3 ml of tulsi leaves juice give relief in cold & cough. Paste of Tulsi leaves effectively cures pimples & acne.
2.	<i>Mentha arvensis</i> Linn.	Pudina	H	C	leaves	1. Fresh leaves juice with a teaspoonful lime juice & honey taken thrice a day for the treatment of indigestion, diarrhea. 2. Fresh mint juice mix with vinegar, honey & carrot juice is useful in tuberculosis, asthma, bronchitis. 3. Fresh leaves juice applied on the face every night & wash with plain water next morning useful in skin dryness, pimples & acne.
Menispermaceae						
1.	<i>Tinospora cordifolia</i> Bunge	Galoye	H	C	Stem, roots, leaves	1. Mixutre of 10 ml of gloye juice with 8-10 drops of Satyanshi oil taken twice a day can cure jaundice. 2. Decoction of stem is taken for chronic rheumatism, fever, malaria, & urinary disorder.
Mimosaceae						
1.	<i>Acacia catechu</i> Willd	Khair	T	C	Twig, bark , root	1. Decoction of bark mixed with milk help to cure cough & cold. 2. Catechu powder & dalchini powder taken with honey to cure diarrhea. 3. Paste of fresh root is applied on joints once a day for a week to cure rheumatism.
Moraceae						
1.	<i>Artocarpus integra</i> Merrill.	Kathal	T	Oc	Bark, seed, fruits	1. The bark powder is used in chronic diseases. 2. Fruit juice is effective against Jaundice, cutaneous infections and antidote to scorpion poison.
2.	<i>Ficus glomerata</i> Roxb.	Tryambloo	T	C	Fruit, root, bark	1. The inner side of bark paste is used in pimples, acne & freckles. 2. Roots are useful in diarrhea, dia-

						betes. 3. Powder of fruits with milk taken three times a day can stop blood during vomiting.
3.	<i>Ficus palmata</i> Forssk.	Khashra	T	Oc	Bark, fruit	1. The fruits are laxative. 2. The fruits are used to cure jaundice & enlarged spleen. 3. The bark is astringent & diuretic.
4.	<i>Ficus religiosa</i>	Peepal	T	C	Leaves, fruits, bark	The decoction of bark is useful in variety of diseases such as skin diseases, rheumatism, ulcers & scabies. The dried fruits or figs are given in case of asthma. The oral intake of leaves gives strength to heart and also given to treat feverish conditions & arresting bleeding.
Myrtaceae						
1.	<i>Syzygium cuminii</i> Linn.	Jamun	T	C	Bark, leaves, fruits	1. The powder of bark with honey taken twice a day is used for arresting diarrhea. Powder of seeds with sugar taken two to three times a day used for the treatment of dysentery. 2. The juice of leaves mixed with black pepper powder taken twice a day for few weeks used for the kidney stones. 3. The paste of leaves is used on cuts & wounds for faster healings.
Papilionaceae						
1.	<i>Trigonella foenum-graecum</i> Linn.	Methi	H	Oc	Leaves, seeds	1. The paste of leaves is applied on the scalp for promoting hair growth & curing dandruff. 2. The intake of seeds reduces the cholesterol. 3. Dried fried seed powder with honey used for the treatment of diarrhea, loose motion, dysentery. 4. Seed powder taken in dose of 6 grams twice a day with water gives relief in joint pain.
Poaceae						
1.	<i>Cynodon dactylon</i> Linn.	Doob	H	C	Whole plant	1. For nose bleeding the 4 drops of fresh juice of doob grass are put on the nostrils. 2. For frequent nose bleeding use few drops of juice in nostril regularly to cure nose bleeding permanently. 3. Grass juice with honey taken 2-3 times a day for heavy & prolonged menstrual period. 4. Juice of grass with alum & gargle used for mouth ulcer.
Rosaceae						
1.	<i>Pyrus pashia</i>	Kainth	T	C	Fruits,	1. Used to treat mouth and eye in-

	Buch.-Ham.				leaves	fections. 2. Fruits & leaves are used in curing sores.
Rutaceae						
1.	<i>Aegle marmelos</i> Corr.	Bael	T	Oc	Fruit, bark, root	1. Juice of soft bael leaves mixed with black pepper taken every morning & evening for the treatment of jaundice. 2. The dried pulp helps to cure diarrhea. Fresh bel fruit is used to cure dysentery. Powder of dry pulp of fruit add in boiled cow milk taken a twice a day used in treating anemia. The grind leaves are boiled in one cup of water till it become thick. This paste with honey taken twice a day for the treatment of typhoid. 3. Bael leaves are chewed with empty stomach in the morning for the treatment of diabetes.
2.	<i>Citrus limon</i> Linn.	Nimbu	T	C	Fruits	1. Amla powder in lemon juice is applied on the scalp to remove dandruff & prevent hair fall. 2. 20 ml of onion juice added in lemon juice taken for few days in case of liver enlargement. Equal amount of lemon juice with cucumber juice & rose water are applied on the face for 15 minutes are useful in improving complexion, fairness, glowing skin, and in face wrinkles. Lemon juice with honey in Luke warm water drinks empty stomach in morning for the obesity.
3.	<i>Citrus medica</i> Linn.	Galgal	T	C	Fruits	1. The fruit juice & water is useful in case of diarrhea & digestive disorders. 2. The ripe fruit juice is useful in cholera & conclusive cough.
4.	<i>Murraya koenigii</i> Linn.	Kandhela	S	C	Stem, leaves	1. Powder of leaves consumed 3-4 gms daily in the morning help to reduce blood sugar level. 2. The decoction of leaves is used in curing stomach pain. 3. Coconut oil (100ml) with curry leaves & neem leaves useful in treating baldness, premature hair fall & helpful in growth & strength of hairs.
Solanaceae						
1.	<i>Datura stramonium</i> Linn.	Datura	S	Oc	Whole plant	1. The seeds are used in the treatment of leprosy. 2. The leaves are used as poultice for inflammation & boils & to get relief from headache. 3. Fruit juice is used for earache.

						4. The leaf smeared with oi; is used for rheumatic swelling of joints & neuralgia.
2.	<i>Withania somnifera</i> Linn.	Ashwagan- dha	S	Oc	Roots, leaves	1. 3 gms of Ashwagandha with 3gms ghee & 1 gms misri taken twice a day for the rheumatism. 2. Powder of ashwagandha mix in glass of milk and drink used for the joint pains. 3. 200-1200 mg of ashwagandha powder with tea is useful in thyroid.
Verbenaceae						
1.	<i>Vitex negundo</i> Linn.	Banna	S	C	Leaves	1. Leaf powder is taken in dose of one table spoon; twice a day is useful in arthritis. Decoction of leaf is used in abdominal gas & pain. 2. Root decoction is used in chronic fever, intestinal parasites. Leaves are boiled in water & the vapour is inhaled twice a day is used for cough, cold, headache, fever. 3. A dried fruit powder is orally taken with honey in a dose of 5-10 gms is useful in diarrhea. 4. Leaf powder is taken in dose of half teaspoon twice a day is help in strengthening hair, reduce swelling, curing swollen joints & its pain. 5. Heated leaf is pressed & tied for rheumatoid arthritis pain. 6. Dried fruits powder is taken in a dose of 5-10 gms with roasted common salt & warmed water useful in menstrual disorders, urinary disorders and indigestion.

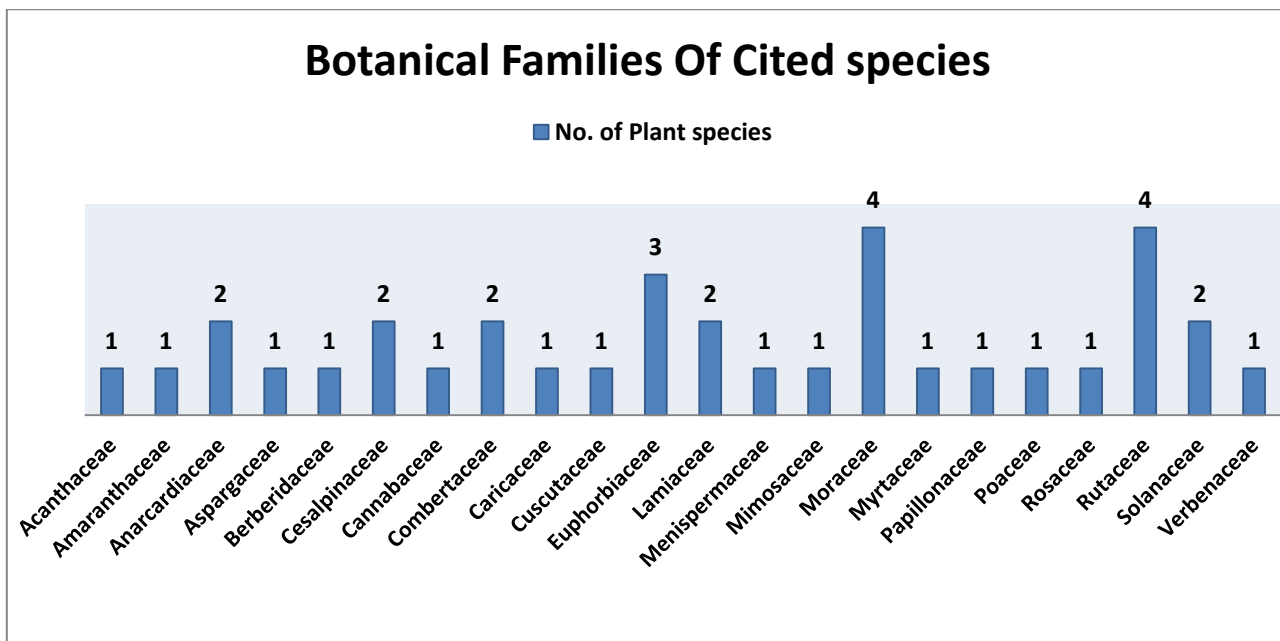


Figure 2: Number of plant species present in the different families

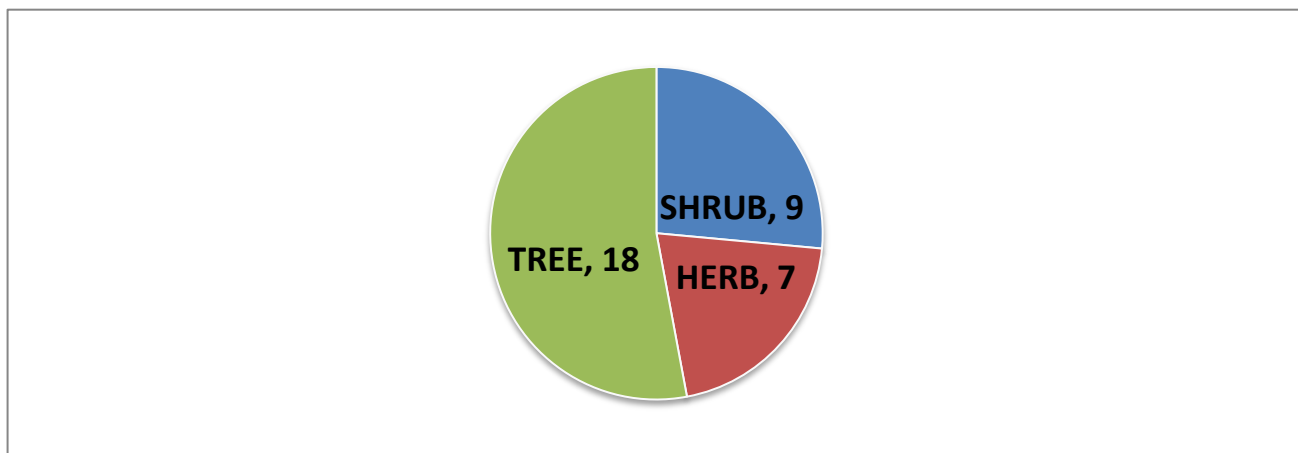


Figure 3: Different life form of plant species used for medicinal treatment.

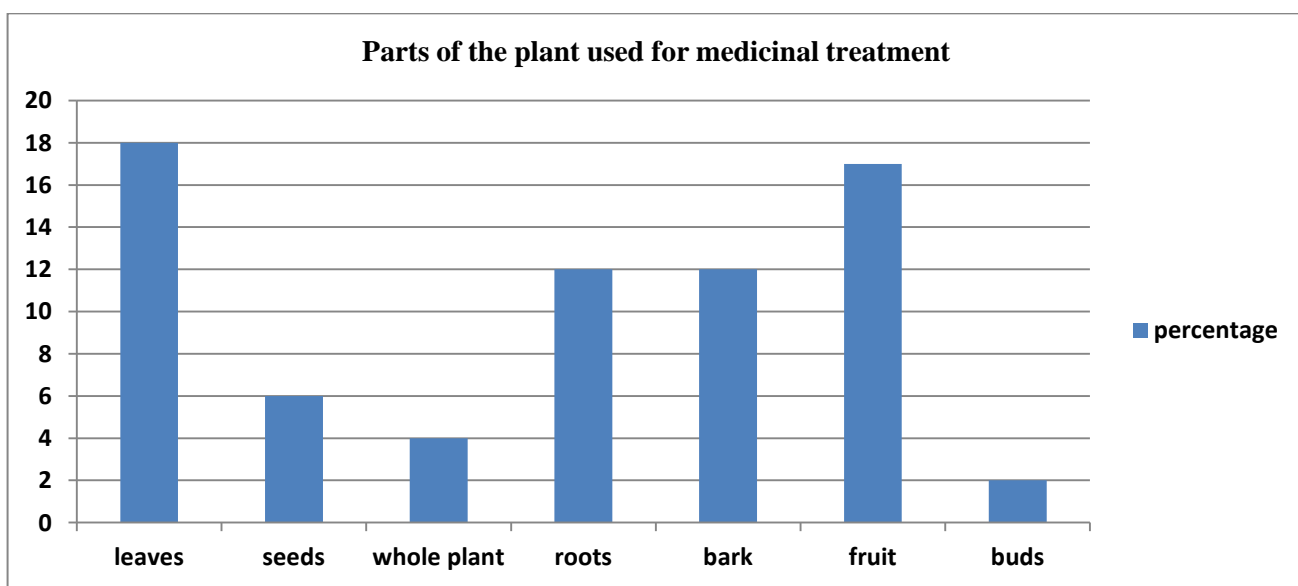


Figure 4: Parts of the plant used for the medicinal treatment

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