

Original Research Article

MEDICINAL PLANTS USED BY TRADITIONAL HEALERS OF PUNJAB, PAKISTAN

Sonia Imtiaz*¹, Sahar Abdullah¹, Saima Afzal², Gohar Rehman¹, Mamoona Waheed¹

1. Faculty of Pharmacy, University Of Sargodha, Sargodha 40100 Pakistan
2. Faculty of Pharmacy, Bahauddin Zakariya University Multan, Pakistan

ABSTRACT:

This study is aimed to document the indigenous knowledge of medicinal plants used by traditional healers of Punjab, Pakistan. The medicinal uses were documented by semi structured interview of the registered herbalists & relevant literatures were also reviewed. The data was collected by visiting the study area from Feb 2013 to August 2013. All traditional plants having therapeutic activity were crosschecked with existing literature on ethno botany. In our data about 150 indigenous plant species, which belongs to 55 families were documented along with their local names, part used and the use value of each species. This Data showed that highest number of plants used by local community belongs to Asteraceae Family. In our data *Syzygium cumini* (L.) Skeels has the highest use value that is 1 and the plants with lowest use value (0.2) are *Eclipta alba* (L.) Hassk, *Ruellia tuberosa* L., *Aerv javanica* (Burm.f) juss. It is concluded from data that our study area possesses a variety of indigenous medicinal plants that are widely used by hakims, herbalists for primary health care of local community of Province Punjab, Pakistan.

Keywords: Ethno medicine; Hakim; Indigenous knowledge; Traditional Healers.

Corresponding Author: Sonia Imtiaz Pharm-D., M.Phil. (Scholar) Pharmacology, Faculty of Pharmacy, University of Sargodha, Sargodha 40100 Pakistan. E.: dr.sonii@hotmail.com

INTRODUCTION:

Medicinal plants and extracts of medicinal plants play a basic role in the traditional health care system for human beings [1]. Ethno medicine is a field of medicine which deals with the study of traditional plants to treat different ailments by indigenous people [2]. In our system, a lot of work is required to be done to assess the medicinal uses of plants because in Pakistan only hakims and herbalists are associated with plants for medicinal purposes [3][4][5]. Traditional medicines has been the main source of primary health care for poor communities since indefinitely ancient times. About 80% populations from developing countries depend on traditional medicinal practice for their basic health care requirements [6] [7]. These were widely used in Pakistan due to less side effects & easily accessibility of these medicinal plants from nature [8]. Traditional medicines are major source for new inventions in allopathic treatments. Evaluation of many traditional plants on scientific basis has proven to contribute a lot of potent novel drugs [9] [10].

The indigenous knowledge of traditional plants is rapidly disappearing due to less documentation and changes in traditional culture[11][12].The people in rural areas use about 90% of the traditional plants for medicinal purposes[13].

Pakistan is a country which is blessed with rich plant biodiversity. It possesses more than 6000 flowering plant species [14]. There are about 600 – 700 plants which are used as traditional medicine in Pakistan [15]. Only few studies have been conducted to explore the medicinal uses of traditional plants [16]. Due to the significant importance of indigenous medicinal plants flora, this study was conducted to collect and document Ethno medicinal use and indigenous knowledge about the medicinal plants of Punjab, Pakistan.

MATERIALS AND METHODS

Choice of study area

Ethno medicinal survey was conducted in nine districts of Punjab, Pakistan which were randomly selected namely Sargodha, Lahore, Sialkot, Gujranwala, Rawalpindi, Sahiwal, Multan, Gujrat, and Faisalabad from Feb 2013 to August 2013 to document the traditional plants used by registered herbalists.

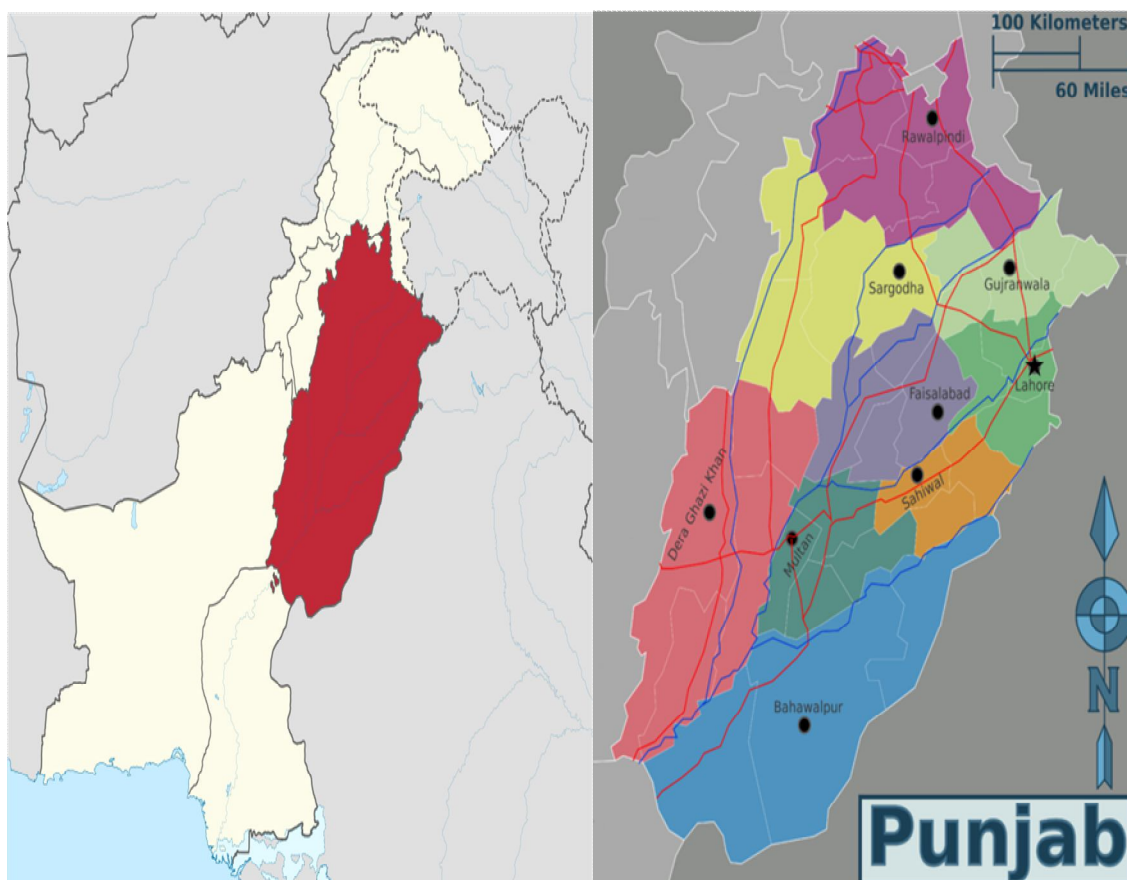


Fig 1: Map of Punjab, Pakistan; Location of the province of Punjab in Pakistan [20]

Collection & Identification of Traditional Plant Species

Description of study area:

Punjab is the 2nd largest province of Pakistan. It Comprises of 205,344 km² area and is located b/w latitudes 27.42° and 34.02°N & longitudes 69.81° and 75.23° E at the northwestern edge of the geological Indian plate in South Asia. It comprises fertile river valleys [18]. Its land is largely irrigated with a number of canals. Favorable weather changes occur in this area. In Punjab, all

soil types are found [17] [18]. 70 million populations have been estimated in Punjab [19]. Fig 1 shows map of Punjab, Pakistan.

The data was collected by personally visiting the study area and from Feb 2013 to August 2013. The medicinal uses were documented by semi structured interview of the registered herbalists & relevant literatures were also reviewed. All traditional plants having therapeutic activity were crosschecked with existing literature on ethno botany. The medicinal plants were identified and confirmed with the help of Flora of Pakistan [21] [22] [23].

Data Analysis

The relative significance of each traditional plant species having indigenous medicinal uses by indigenous people was determined by calculating its use value [24].

Use value for species i ; $UV_i = \sum \mu_i / N_i$.

Here, number of use reports told by each participant for a respective traditional plant species," i is denoted by μ_i " & total number of participant interviewed for a respective plant species," i is denoted by N_i .

RESULTS & DISCUSSION

In Table 1, 150 indigenous plant species which belongs to 55 families are mentioned along with their local names and the use value of each species. Only one indigenous plant species of Alliaceae, Anacardiaceae, Annonaceae, Bombaceae, Chenopodiaceae, Cannabinaceae, Cappariaceae, Combretaceae, Crassulaceae, Cuscutaceae, Cyperaceae, Liliaceae, Menispermaceae, Oxalidaceae, Orobanchaceae, Papaveraceae, Pinaceae, Pontederiaceae, Punicaceae, Polygonaceae, Rosaceae, Rubiaceae, Salvadoraceae, Sapindaceae, Tamaricaceae, Typhaceae and Zygophyllaceae families was used commonly in study area for medicinal purposes. 2 species of Acanthaceae, Arecaceae, Lamiaceae, Nyctaginaceae, Portulacaceae, Rhamnaceae, Rutaceae and Tiliaceae families, 3 plant species of Aizoaceae, Apiaceae, Asphodelaceae, Brassicaceae, Convolvulaceae, Myrtaceae, 4 of Apocynaceae, Cucurbitaceae, Fabaceae, 5 of Malvaceae, Mimosaceae, 6 indigenous plant species of family Amaranthaceae, Euphorbiaceae, Papilionaceae, Solanaceae, 7 of Boraginaceae, Moraceae, 8 of Poaceae, 9 of Asclepiadaceae and 12 indigenous plant species of family of Asteraceae were used for medicinal purposes. According to a previously conducted study in Gujranwala, most commonly used medicinal plants belong to Asteraceae Family [25]. Our Data showed the same results enumerating that highest number of plants used by local community belongs to Asteraceae Family.

Syzygium cumini (L.) Skeels has the highest use value that is 1, then the following indigenous plants as *Aloe vera* (L.), *Mentha spicata* L., *Azadirachta indica* (Linn.)A. Juss., *Acacia nilotica* (L.) Delile, *Dalbergia sissoo* Roxb.ex DC, *Psidium guajava* L., *Punica granatum* L., *Zizyphus nummularia* (Burm.f) Wight and Arn., *Citrus limon* (L.) Burm. f., *Withania somnifera* L. have high value that is 0.9, and the rest have lower use value then above mentioned plants. In our data the plants with lowest use value (0.2) are *Eclipta alba* (L.) Hassk. *Ruellia tuberosa* L., *Aerva javanica* (Burm.f) juss.

Table 1: Indigenous plant species with their family names, local name, medicinal uses and their respective use values.

Sr No.	Family	Botanical name	Common name	Part use	Ethno medicinal use	Use value
I.	Amaranthaceae					
i.		<i>Achyranthes aspera L</i>	Puth Kanda, Chaff Plant	Whole Plant	kidney problems, diuretic ,heart & skin problems, ulcers and cough & root decoction is used for syphilis, purgative	0.4
ii.		<i>Aerva javanica(Burm.f)juss.</i>	Booeeen	Whole plant	Inflammation	0.2
iii.		<i>Althernanthera punjens</i>	Haglon	leaves , Fruits	Itching	0.5
iv.		<i>Amaranthus graecizans subsp. Sylvestris</i>	Phulari	Leaf	Gonorrhea, Inflammation, Piles,	0.7
v.		<i>Amaranthus viridis L.</i>	Chulai,Ghunar	Whole plant	Rheumatoid arthritis, leacorrhea, piles, Emollient & Carminative	0.6
vi.		<i>Digera arvensis L.</i>	Tandla	Leaf	cure weak bones, Infections	0.3

2.	Acanthaceae					
i.	<i>Dicliptera bupleuroides</i> Nees	Chanin	leaves	Tonic		0.4
ii.	<i>Justicia adhatoda</i> L.	Baekr	leaf , Fruits	Cough, cold, flu, fever Sore throat, , Toothache		0.8
3.	Aizoaceae					
i.	<i>Ruellia tuberosa</i> L.	Traino	Whole plant	Blood purifier		0.2
ii.	<i>Trianthema portulacastrum</i> L	Itsit	Whole plant	Anthelmintic ,Liver infection, Asthma & Diuretic ,constipation		0.8
iii.	<i>Zaleya pentandra</i> (Linn)Jeffrey	Kali itsit	Whole plant	Snake bite, abortion		0.7
4.	Alliaceae					
	<i>Allium sativum</i> L.	Thom	Whole plant	Blood pressure, hypertension, cardiac problems Respiratory problems		0.7
5.	Anacardiaceae					
	<i>Mangifera indica</i> L.	Aam, Mango	Leaf and Seed	Ear pain & antiemetic		0.8

6.	Annonaceae	<i>Polyalthia longifolia</i>	Ulta ashok	Leaves, Root, stem	diabetes, hypertension, skin diseases, Fever & antihelminthic	0.8				
7.	Apocynaceae	<i>Alstonia scholaris</i> (L.) <i>R.Br.</i>	Chhatiwan, satpatia (S).	Bark, Leaves	asthma, headache, lactation enhancer, ulcer, antipyretic, diarrhea ,dysentery & spasmodic activity	0.6				
ii.						<i>Catharanthus roseus</i>	Sada Bahar	Leaf	Diabetes	0.7
iii.						<i>Nerium Oleander</i> <i>Mill.</i>	Kanhera, Oleander	Root	Toothache, Abortion Earache	0.6
iv.						<i>Plumaria obtuse</i>	Chelota	Flower	Antipyretic & Skin diseases	0.5
8.	Apiaceae	<i>Foeniculum vulgare</i> <i>Miller</i>	Saunf	Fruit	Purgative, Gas troubles Laxative, Carminative improve eyesight ,Kidney problems	0.8				
9.	Arecaceae	<i>Phoenix dactylifera</i> L.	Khajur	Fruit	Body weakness	0.8				
ii.						<i>Syngonium podophyllum</i>	Nephthytis	Leaves	cancer , for mouth and feet diseases.	0.7
10.	Asclepiadaceae	<i>Artemisia scoparia</i> <i>Waldst and Kit.</i>	Chaou	Whole plant	Malaria, strengthen hairs	0.6				
ii.						<i>Calotropis procera</i> (Aiton) W.T. Aiton	Dasi Ak, Sodom's Apple	Leaf, root	asthma ,Rheumatism, Dysentery, Expectorant Scabies, leprosy, antihelminthic & pain	0.8
iii.						<i>Caralluma edulis</i>	Chonga	Whole plant	Anthelmintic, Diuretic action	0.6

iv.		<i>Carthamus oxyacantha M. Bieb</i>	Pholi	Whole plant	Jaundice & Ulcer	0.5
v.		<i>Eclipta prostrata (L.) L.</i>	Bhangra	Whole plant	Stop hair fall, Antiseptic, Emetic	0.6
vi.		<i>Parthenium hysterophorus L.</i>	Partha	Whole plant	Laxative, Diabetes	0.4
vii.		<i>Periploca aphylla Dcne.</i>	Berri	Whole plant	Tumor, urticaria	0.7
viii.		<i>Taraxacum officinale Weber</i>	Hund	Whole plant	Diabetes, Constipation & Liver problems	0.5
ix.		<i>Xanthium strumarium L.</i>	Chota dhatoora	Whole plant	Skin problems as eczema, diuretic Sedative	0.4
11	Asphodelaceae	<i>Aloe vera (L.)</i>	Kwargandal	Leaf	Rheumatism, body weakness And for pimples	0.9
12	Asteraceae					
i		<i>Artemisia annua Linn</i>	Jaho	Leaf	Blood purifier, fever & jaundice treatment	0.5
ii		<i>Artemisia scoparia Waldst. & Kit.</i>	Jhahoo, Wormwood	Whole plant	purgative and in burns	0.5
iii		<i>Artemisia vulgaris Linn</i>	Tatwan	Whole plant	Cardiac problems	0.6
iv		<i>Carthamus oxyacantha M. Bieb.</i>	Poli, Carthamus	Seed	Ulceritis	0.7
v		<i>Carthamus tinctorius L.</i>	Safflower	Flowers and leaves	fever, throat problems ,cough and typhoid fever	0.7
vi		<i>Conyza canadensis Lin.</i>	Horse weed,paleet	Whole plant	Inflammations, dysentery, diarrhea, bronchial catarrh ,	0.6

vii		<i>Echinops echinatus Roxb</i>	Lay, katara	Whole plant	Cystitis, haemostatic stimulant, astringent, diuretic & asthma Fever, pain, diuretic, jaundice & sexual disability.	0.4
viii		<i>Eclipta alba (L.) Hassk</i>	Sofed Banghra	Leaf	hypersensitivity, athlete's foot & ringworm	0.2
ix		<i>Vernonia scinerescens</i>	Simbla	Leaves, Rhizomes	Gastritis, Male sterility problems, Urinary infections, ulcers and laxative	0.4
x		<i>Launea procumbus</i>	Bhatter	Whole plant	comon cold, flu, cough and wound infection, toothache, diabetes, laxative, intestinal disorders, gonorrhoea and painful urination	0.3
xi		<i>Saussurea hetromalla L.</i>	Kali zri	Whole plant	Liver, kidney, respiratory diseases, tonic	0.6
xii		<i>Xanthium strumarium Linn.</i>	Chhota Dhatura, Cocklebur	Roots, fruit and Seeds	Stomach problems demulcent, smallpox & dysentery.	0.6
13	Brassicaceae					
i		<i>Cleome viscosa</i>		Leaves, seeds, root	Wounds, earaches, ulcers carminative, stimulant & vesicant & anthelmintic,	0.5
ii		<i>Eruca sativa Mill</i>	Tara mira	Leaves, seeds	Skin diseases, diuretic, stimulant & lice killer	0.8
iii		<i>Lepidium sativum L.</i>	Haloon	Whole plant	Abdominal pain, dysentery, skin and blood disorders	0.4
14	Bombaceae	<i>Bombax ceiba Linn.</i>	Simbhal	Whole Plant	Leucorrhoea, diarrhea, dysentery and astringent	0.6
15	Boraginaceae					
i.		<i>Cordia gharaf</i>	Liyaar	Whole	Hepatitis, wound inf.	0.5

		(Forssk.) Ehren. Ex Asch.		Plant		
ii.		<i>Cordia myxa</i> Linn.	Lasora	Whole plant	Jaundice	0.7
iii.		<i>Ehretia laevis</i> Roxb.	koda	Whole plant	Diphtheria	0.6
iv.		<i>Heliotropium</i> <i>Crispum</i> Desf.	Papal booti	Whole Plant	Snake bite, eye infection	0.6
v.		<i>Heliotropium</i> <i>Europaeum</i> Linn.	Hathi sundhi	Whole Plant	Hair fall problem	0.7
vi.		<i>Heliotropium</i> <i>strigosum</i> Wild.		Whole Plant	Blood purifier, Diuretic, UTI	0.5
vii.		<i>Trichodesma</i> <i>indicum</i> (L.) R. Br.	Kulfa	Whole plant	Fever Diarrhea, dysentery, rheumatism & Diuretic	0.8
16	Chenopodiaceae	<i>Chenopodium album</i> L.	Bathu	Whole plant	Urinary problems, piles, worms & Laxative Sexual problems, jaundice, cough & tonic	0.7
17	Cannabinaceae	<i>Cannabis sativa</i> L.	Bhung	Leaves	Narcotic, Sedative, intoxication, Diuretic, laxative ,Throat soreness ,Diarrhea & loss of appetite	0.8
18	Capparidaceae	<i>Crataeva adansonii</i> DC.	Berna	Whole plant	urinary bladder stones	0.5
19	Combretaceae	<i>Terminalia chebula</i> Retz.	Harar	Whole Plant	Wound, Astringent, purgative, laxative and stomachic	0.7
20	Convolvulaceae					
i.		<i>Convolvulus arvensis</i> L.	Bahar bail, Leli / weli, Vahri,	Whole plant	Anthelmintic, control dandruff, Emollient & stomach Disorders, Constipation, and	0.6

					Inflammations	
ii.		<i>Ipomoea eriocarpa</i>	morning glory	Leaves,seeds	menstrual pain, headache, ulcers, fevers, rabies.	0.6
iii.		<i>Ipomea pentaphyllum</i>	Beli	Leaves and Seeds	Skin diseases, Constipation & emesis	0.4
21	Crassulaceae	<i>Bryophyllum pinnatum (Lam.) Oken</i>	Zakhm-i-hayat	Whole plant	Remove kidney and bladder stone	0.5
22	Cucurbitaceae					
i.		<i>Benincasa hispida (Thunb.) Cong.</i>	Bhtha	Leaves	diuretic, laxative, Anthelmintic & Epilepsy	0.5
ii.		<i>Citrullus colocynthis (L.) Schrad.</i>	Tumma	Leaves	Purgative, amenorrhea, stomach aches	0.6
iii.		<i>Cucumis melo var. agrestis Naudin</i>	Jngli kharboz, Chibbar	Fruit, leaves and seed	Jaundice ,stop hair whitening Leucorrhoea, Dysuria, digestive issues, skin infection, Laxative,	0.7
iv.		<i>Cucurbita pepo L.</i>	Kaddo		Helmenthesis	0.8
23	Cuscutaceae	<i>Cuscuta reflexa Roxb.</i>	Neeli taar, Akash Bail, Dodder	Stem	Diabetes, Sexual problems, rheumatism Toothache, hair problems & paralysis	0.6
24	Cyperaceae	<i>Cyperus rotundus L.</i>	Deela	Rhizomes	Diuretic ,Diarrhea, pneumonia, dysentery Fever, blood disorders, cholera ,diuretic, and stomachic	0.5
25	Euphorbiaceae					
i.		<i>Euphorbia heliscopia L.</i>	Chattri Dhodak, Lun spurge	Whole plant	Purgative, Intestinal problems, Skin eruption	0.5
ii.		<i>Euphorbia hirta L.</i>	Aam dodak, Doddak	Leaves and inflorescence	Treatment of eye problems, Burns, injuries, bronchitis,	0.7

					cough and asthma Asthma, Expectorant,	
iii.		<i>Euphorbia prostrata L</i>	Hazar daani	Whole plant	Skin diseases & itching	0.5
iv.		<i>Euphorbia thymifolia L.</i>	Choti dhodi	Whole plant	Antihelminthic, astringent, diarrhea, skin and stomach problems, laxative, & menorrhagia	0.6
v.		<i>Euphorbia tircucali L.</i>	Sijh	Juice	purgative, vesicant, rheumatism , toothache, ear pain, cough and for asthma.	0.4
vi.		<i>Ricinus communis L.</i>	Hernoli, arind	Whole plant	arthritis, Scabies, Obesity, menses Stomach and bowels problems	0.3
26	Fabaceae					
i.		<i>Cassia fistula L.</i>	Amaltas	Seed	Diarrhea & Gastric problems,	0.7
ii.		<i>Pongamia pinnata (Linn.)</i>	Sukhechain	Whole plant	Vermifuge, Carminative, Toothache & Rheumatism and skin diseases”	0.8
iii.		<i>Rhyncosia minima</i>	Jungli moath	Whole plant	after delivery bath for body care	0.7
iv.		<i>Tephrosia lupinifolia DC</i>	Poison fish	Roots, Leaf, Stem, bark	Stomach ache, urinary disorders ,diarrhea, rheumatism, & asthma	0.8
27	Lamiaceae					
i.		<i>Mentha spicata L.</i>	Podeena	Leaves	Antiseptic, Carminative, gastric & Diarrhea	0.9
ii.		<i>Leucas aspera (Jacq.) Ait.</i>	Jhumka booti	Leaves	Gastritis	0.7
28	Liliaceae					
		<i>Asparagus racemosus Wild</i>	Satmuli	Roots	Mental disorders, appetizer, diuretic,	0.6

					carminative, antispasmodic, Diarrhea, dysentery, dyspepsia and rheumatism.	
29	Malvaceae					
i.		<i>Abutilon indicum</i> (L.) Sweet.	Peeli Booti	Leaf and seed	Purgative ,toothache and inflammation	0.6
ii.		<i>Azadirachta indica</i> (Linn.)A. Juss.	Neem	Leaf and fruit	Laxative, blood purifier & skin inf	0.9
iii.		<i>Bombax ceiba</i> L .	Simbal	Flowers, Roots, bark and seeds	Gonorrhea, Dysentery, blood purifier, constipation, and snake bite	0.5
iv.		<i>Hibiscus rosasinensis</i> L.	Chembarathi, Shoe Flower	Flower	Cardiac problems	0.5
v.		<i>Malva parviflora</i> L.	Sonchal, Mallow	Leaf and seed	Cold, flu, cough, pyrexia & Laxative agent	0.8
30	Menispermaceae	<i>Tinosporia cordifolia</i> (Willd.) Miers	Glow, Heart Leaved Moon Seed	Seed	Tuberculosis	0.5
31	Mimosaceae					
i.		<i>Acacia modesta</i> Wall	Phulahi	Bark and stem, leaves	Sexual problems ,Teeth problems & carminative	0.6
ii.		<i>Acacia nilotica</i> (L.) Delile	Kekar	Pod	Gonorrhea ,Sexual disorders & Diarrhea	0.9
iii.		<i>Albizia lebbek</i> Benth.	Siris	Bark	tonic, Sexual disorders, Asthma Inflammations, cough, eye infections, abdominal tumors, flu, gingivitis, lung problems, pectoral problems, hernia, & blood purifier	0.8

iv.		<i>Dalbergia sissoo</i> <i>Roxb.ex DC</i>	Tali, Rosewood	Bark	Epistasis	0.9
v.	Moraceae	<i>Prosopis cineraria L.</i>	Jundh	Leaf	Leucorrhoea	0.6
32		<i>Eucalyptus globules</i> <i>L.</i>	Safaidda		Flu, Sore throat & common Cold	0.8
i.		<i>Ficus benghalensis L.,</i>	Boher Banyan	Latex	Gonorrhea	0.7
iii.		<i>Ficus benjamina</i>	Weeping fig	Whole Plant	As Blood purifier	0.6
iv.		<i>Ficus racemosa Linn.</i>	Gulhar	Fruits	astringent and carminative	0.7
v.		<i>Ficus religiosa L.</i>	Peepal	Bark, Fruit, Seed	Asthma, urinary problems, constipation and emesis	0.7
vi.		<i>Morus alba Linn.</i>	Tut sufaidd	Whole Plant	Liver problems & tonsils	0.8
vii.		<i>Morus nigra L.</i>	Mulberry, Kala toot	Fruit, leaves, Root	Sore throat, cough, Stomach problem, Carminative & blood purifier	0.7
33	Myrtaceae	<i>Eucalyptus</i> <i>camaldulensis</i> <i>Dehnh.</i>	Sofeda, Eucalyptus	Leaf	Common cold & nose infections	0.8
i.		<i>Psidium guajava L.</i>	Amrood, Guava	Fruit	stomach disorders and appetizer	0.9
iii.		<i>Syzygium cumini</i> <i>(L.) Skeels</i>	Jamun	Seed	Diabetes	1
34	Nyctaginaceae	<i>Boerhavia procumbens</i> <i>Banks ex Roxb</i>	Itsit	Root	Jaundice	0.7
i.		<i>Mirabilis jalapa L.</i>	Gul-e-Asar	Whole plant	Skin eruption ,Hepatitis Purgative	0.6

35	Oxalidaceae	<i>Oxalis corniculata L.</i>	Khuti booti, Yellow oxalis	Leaves	& constipation Spermatorea, Emollient & diarrhea	0.7
36	Orobanchaceae	<i>Cistanche tubulosa (Schenk) R. Wight</i>	Harni khaj	Whole plant	blood purifier, cough, episatasis, fever, laxative & digestive.	0.5
37	Papilionaceae					
i.		<i>Alhagi maraurum Medic.</i>	Phuwa	Leaves	Severe piles, diuretic & laxative	0.3
ii.		<i>Butea monosperma (Lam.) Taubert</i>	Plata	Flower	Sexual disorders	0.4
iii.		<i>Crotolaria burhia Buch.-Ham.</i>	Sann	Whole plant	Diuretic, Blood purifier & Cardiac problems	0.3
iv.		<i>Dalbergia sissoo Roxb.</i>	Shishum,tali	Whole plant	Fever, Emollient, antiemetic, leprosy, dysentery & diarrhea and skin disease	0.5
v.		<i>Indigofera linifolia (L.f.) Retz.</i>	Turkhrai	Whole plant	skin problems	0.2
vi.		<i>Meliolotus parviflora</i>	Sainji	Whole Plant and seeds	bowel disorders	0.4
38	Papaveraceae	<i>Argemone Mexicana L.</i>	Stianasi		Sexual problems, Premature ejaculation & Spermatorea	0.4
39	Pinaceae	<i>Pinus roxburghii Sarg</i>	Chir	Bark, Resin	cough ,burn wounds and gastric disorders.	0.7
40	Poaceae					
i.		<i>Arundo donax L.</i>	Nerra	Leaf and stem	Fever	0.3
ii.		<i>Avena sativa L.</i>	Jao, Oat Javi	Whole plant	Tension ,skin allergies antispasmodic & Diuretic	0.4
iii.		<i>Bumbusa arundinacea (L.)</i>	Baans	Whole plant	skin burns, Carminative, common cold	0.5

		<i>Voss ex Villas</i>				
iv.		<i>Cynodon dactylon</i> (L.) Pers.	Khabal	Whole plant	dysentery , Purgative , Blood purifier, Epitasis & antiseptic	0.5
v.		<i>Desmostachya bipinnata</i> (L.) Stapf.	Dab, Tail Grass	Leaf	Fever	0.6
vi.		<i>Paspalidium flavidum</i>	Madhana Ghas	Leaves	Skin heart, skin itching, eyes, teeth, , headache liver diseases, prevent miscarriage & uterine pains after delivery.	0.5
vii.		<i>Saccharum spontaneum</i> L.	Sarrout	Whole plant	appetizer and abdominal pain	0.4
viii.		<i>Zea mays</i>	Makai	Stigma of female flowers	Urinary disorders, Bladder cleaning and kidney disorders.	0.7
41	Pontederiaceae	<i>Eichhornia crassipes</i> (Mart.) Schlecht.		Whole plant	Emollient Blood purifier	0.3
42	Polygonaceae	<i>Polygonum plebijum</i> R. Br.	Droonk	Whole plant	Intestinal & cardiac problems	0.4
43	Portulacaceae					
i.		<i>Portulaca quadrifida</i> L.	Little Hogweed ,Dasi kulfa	Leaves and seed	genito-urinary tract disorders, dysentery, constipation, sores, cold, respiratory problems Vermifuge, Antiseptic & insect bites	0.6
ii.		<i>Portulaca oleracea</i> L.	Kulfa,Purslane	Whole plant	Liver ,spleen, skin allergy, bladder problems, typhoid & iron deficiency	0.7
44	Punicaceae	<i>Punica granatum</i> L.	Anaar, Pomegranate	Exocarp of fruit	Blood purifier & Dysentery	0.9

45	Rhamnaceae					
i.		<i>Zizyphus nummularia</i> (Burm. f) Wight and Arn.	Bairi	Whole plant	Constipation, purgative, Emollient & Antiseptic	0.9
ii.		<i>Zizyphus jujuba</i> Mill.	Jujube	Leaf & fruit	Skin infections & iron deficiency	0.7
46	Rosaceae	<i>Rosa indica</i> L.	Gulab	Flower and seed	Eye disorders and heart disease, Emollient, Diuretic, laxative	0.9
47	Rubiaceae	<i>Gardenia jasminoides</i>	Chandna	Leaves and flower buds	Constipation & anthelmintic Stomach ache	0.7
48	Rutaceae					
i		<i>Citrus limon</i> (L.) Burm. f.	Nimboo, Lemon	Fruit	Teeth diseases	0.9
ii		<i>Murraya exotica</i>	Marva Jasmine orange,	Leaves and roots	Antifertility, Anthelmintic, skin diseases, blood disorders, carminative, purgative, Stomachic, leprosy, dysentery and diarrhea	0.8
49	Salvadoraceae	<i>Salvadora oleoides</i> Decne.	Pillo	Aerial parts	Toothache	0.8
50	Solanaceae					
i		<i>Capsicum frutescens</i> L.	Surkh mirch,	Leaf	Cancer & Dyspepsia	0.6
ii		<i>Datura innoxia</i> L.	Siah dahtora, Thorn Apple	Seed	Gonorrhoea, Sedative and Antiseptic, insecticide & sexual dysfunctions	0.5
iii		<i>Solanum nigrum</i> L.	Kainch mainch Nightshade	Leaves and fruit	Obesity, Ear infections, Jaundice Hepatitis, laxative Emollient ,Ophthalmic diseases	0.7
iv		<i>Solanum surattense</i> Burm. f.	Mookri	Leaves, roots and fruit	Rheumatism, respiratory tract problems & fever	0.7
v		<i>Withania coagulens</i> L.	Chota ak	Fruit & Seed	Diabetes, Digestive disorders, and	0.8

vi		<i>Withania somnifera</i> L.	Ak san	Whole plant	blood purification Respiratory problems, Rheumatic disorders, insomnia, fever, and eye diseases, swellings, ulcer & Sexual disorders	0.9
51	Sapindaceae	<i>Dodonaea viscosa</i> Jacq.	Sanatha	Leaf	acidity and skin allergy problems	0.7
52	Tamaricaceae	<i>Tamarix aphylla</i> (L.) H. Karst	Rukh, Tamarisk,frash	whole plant	Infections, Toothache, cough, diarrhea, antiseptic Spleen & liver Disorders	0.6
53	Tiliaceae					
i		<i>Corchorus aestuans</i> L.		Whole plant	Stomachaches & gastric Pneumonia	0.4
ii		<i>Grewia asiatica</i> L.	Falsa	Fruit and bark	Emetic, diuretic, blood purifier ,heart problems, Urinary problems & vagina disorders	0.6
54	Typhaceae	<i>Typha latifolia</i>	Typha	Leaves and Pollens	kidney stones, menstrual problems, Astringent, diuretic, & anticoagulant.	0.5
55	Zygophyllaceae	<i>Tribulus terrestris</i> L.	Puncture Vine, Bhakra	Seed	Gonorrhea, Urinogenital disorder & Back pain	0.6

Major administration route use by traditional healers was oral and topical routes [26]. Due to the lack of modern technologies of data documentation by traditional healers, poor socioeconomic status and unavailability of registered doctors at rural areas, a lot of rural people are still compelled to use traditional medicinal practice for their diseases [27].

CONCLUSION

It is concluded from data that our study area possesses a variety of indigenous medicinal plants that are widely used by hakims, herbalists for primary health care of local community of Province Punjab, Pakistan. Lack of compassion for the present generation removed much of the rich flora of the region. It is need of the time to take emergency measures and increase awareness of plants usefulness so that this wealth can be saved. It is expected that our study will provide a useful data information on the valuable medicinal uses of the natural medicinal plants used by the traditional healers of the area.

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