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The ethnobotanical study of native plants of district Layyah

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The current ethnobotanical survey described the medicinal plant use in Layyah city. Layyah has a diverse flora of medicinally significant plants that can be used in various medicines. Traditional plant-based medicine is the best option due to its low cost, effectiveness, and lack of side effects. For this survey, 87 people were chosen, including locals and Hakeems. Techniques such as questionnaires and interviews were used. In addition, information was gathered through fieldwork and group discussions. The use value, the relative frequency of citation, and the information consensus factor were used for data analysis. Fabaceae was declared the dominant family, with 33 species calculated from this survey. All plant parts, medicinal uses, and medicine dosages were observed. The leaves were the most commonly used plant part, and paste and juice were the most common preparation methods. Trees were more common in all plants than herbs and shrubs.
Keywords: Ethnobotany, Medicinal Plants, Data collection, botanical characterization.

INTRODUCTION

Ethnobotany is a broad discipline that expresses the medicinal uses of plants by local people. Harhberger, a scientist, coined the term ethnobotany in 1895. "It is a traditional use of plants by local or indigenous people," he says. In various parts of Pakistan, approximately 50000 tabibs and herbalists have been documented (Umair *et al.,* 2019). In Pakistan, 4000 herbal market items have been registered (Shah *et al.,* 2020). Ethnobotany is the most fascinating and beneficial discipline that teaches us about the medicinal uses of plants (Zaman *et al.,* 2013). Plant-based medicine is becoming more popular by the day. Around 80% of people in the world use plant-based drugs. (Azeem *et al.,* 2020). A total of 5000 angiosperm plant has been recorded with high medicinal value. These plants are being used worldwide (*Ahmad et al., 2011*).

The importance of ethnobotany is growing by the day. In this universe, ethnobotany is as old as human civilization. Because the poor cannot afford expensive medicines, they rely on herbal remedies. Pakistan's medicinal plant species have been documented, and 12% of plants have been declared therapeutic by 6000 plant analyses (Shinwari *et al.,* 2006). According to a Hocking survey, approximately 84% of residents have relied on plant-based medicine since 1958. Ethnobotany is a fascinating, beneficial, and cutting-edge field in the modern era. Unfortunately, medicinal plants have not been fully explored, so researchers should focus more on ethnobotanical studies. Traditional knowledge must be explored in real-time to be preserved. In the past, many tribes failed to save traditional plants.

We used to buy much synthetic medicine off the shelf, but these medications had various side effects. A maximum of 50000 flowering plants with various medicinal properties are used to produce medicines worldwide. Unfortunately, people in Pakistan are less interested in traditional knowledge. Pakistan has a rich medicinal plant heritage, with over 6000 higher plants. About 600-700 plants from these higher plants are used in the pharmaceutical industry (Shinwari *et al.,* 2010).

MATERIALS AND METHODS

***Study Area*:** This ethnobotanical survey was carried out in the Layyah district. Layyah is a small city in Pakistan's Punjab province. It is surrounded by the province of Punjab to the south. Muzaffargarh is on the southern side, and the Indus

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River is on the western side. District Bhakhar is located to the north, while District Jhang is located to the east. Its division is Dera Ghazi Khan District Layyah has a long summer season and a very short winter season. The weather remains extremely hot from the middle of April to the end of September. There is very little rainfall in district Layyah, especially during the winter season. The temperature ranges from 45 to 106 degrees Fahrenheit "https://wheatherspark.com/y/106982/Average-Weather-in-Layyah-Pakistan-Year-Round". The majority of the people in Layyah speak Saraiki. The total population of district Layyah is 1824230, according to the 2017 consensus. District Layyah's literacy rate is improving daily; 70% is calculated from urban areas while 30% is from rural areas "http://layyah.layyahonline.com/History-Of-Layyah/History-Of-Layyah.html."

Layyah district has a total area of approximately 6291 square kilometers. In spring June 2020, 1511526 plants were planted, with 6280841 plants in the district Layyah. There are approximately 34388 acres of forest on Layyah city land, with 10, 12,828 acres used for cultivation. (https://layyah.punjab.gov.pk/district_profile)

***Ethnobotanical Survey*:** For medicinal plant investigation and calculation, many surveys were conducted in district Layyah from mid-November to mid-July. All of the areas included in district Layyah gathered data. Eighty-seven people were chosen for this survey, including 75 locals and 12 Hakeems. All informants were over 40 because they had more experience with medicinal plants than younger informants. This survey included 37 women and 50 men in total.

In the study area, face-to-face interviews were conducted. Two types of questionnaires were prepared for the interview. One questionnaire, "Questionnaire type 1," is for locals, while the other, "Questionnaire type 2," is for Hakeems.

Figure 1. Collection of *Ficus carica* for medicinal use.

Figure 2. Fresh Cordia myxa calculation for medicinal purpose

Figure 3. Observation on *Carissa carandus*

Figure 4. Citrus reticulate leaves identification and differentiate it.

A field walk with native people from the study area was organized to collect medicinal plants. A field walk was completed with plant collectors, farmers, and shepherds from study sites to identify medicinal plants. When the plant specimens were collected, they were labeled by mentioning the botanical and common names, the date of plant collection, and the common name. The plants were then wrapped in newspaper and pressed with some weight. These plants were mounted on the herbarium after drying.

Locals and Hakeems finished this discussion. Housewives described plants with high medicinal value for group discussion. They shared their knowledge of how plants are commonly used to treat diseases. Then, some local Hakeems and other locals led a group discussion in which they discussed medicinal species, their values, and trends in the use of medicinal plants in the study area. In the group discussion, the dosage of herbal medicine was also discussed. During the group discussion, a home fruit garden was also observed. In group discussions, the questionnaire technique was also used. The plants that were collected were identified using online resources. Plants were identified using plant identification apps such as plant net and snap. The captured plant picture was taken with the plant snap app, which then displays the botanical name and family of the captured plant.

***Use the value of plants*:** Data analysis via value index showed the importance of plants. The use value of plants was found by using the formula:

$$UV=\sum Ui / N$$

Ui= it explains the use of reports that quoted for mentioned plant species by one informant; N= total respondents that were included in the survey.

The higher the use value, the more important the identification of plants. Plants with a lower use value are less important. The relative frequency of citation was investigated for all of the plants.

***Relative frequency of citation*:** Using the relative frequency of citation, the plant with the greatest medicinal value was determined

Formula: RFC=FC/N

FC= frequency of citation (calculated by informants' views about the medicinal value of plants); N= All the informants included in the survey

***Information Consensus Factor*:** The information consensus factor helps examine the informant's views regarding using different medicinal plants to cure different disorders.

Formula: ICF= (nur-nt) / (nur-1)

Nur= total use reports included for the peculiar category of disorder; Nt= used plant species number

If any specie shows a greater information consensus factor, it means this specie is commonly used in the study area. If a specie shows less value of information consensus factor than others, this species is rarely used.

RESULTS

In tehsil Layyah of district Layyah, 33 medicinal plant species, including herbs, shrubs, and trees, were reported, with 23 families and 33 genera. The Fabaceae was the dominant family. For this ethnobotanical survey, 87 people were chosen and interviewed. In total, 75 locals and 12 Hakeems were interviewed across the district of Layyah. All of the informants were over the age of 40.

Table 1. Complete list of medicinal plants (Herbs, Shrubs, Trees) in District Layyah

Sr.	Bot. name /voucher no. /habit	Common name	Family	Plant part used	Preparation method	Therapeutic Use	Dosage	Mode of application
1	*Azadiracta indica*/SFK - 1/Tree	Neem	Meliacee	Leaves and seed	the tincture, soap, juice, paste	Eye disorder, gum disorder, heart disorder and abortion etc Most used remedies: i) Villager's women burn *Azadiracta idica* leaves for 15 minutes and collect the ash of burnt leaves. Then, they mix the ash with yogurt to treat ear wounds. ii) Some people used to eat its seed to treat diabetes. Neem leaves are effective against skin allergies and skin diseases.	Two seeds daily against diabetes/ Leaves paste daily to treat allergies. Dose for another disease should be taken according to Hakeem's suggestion.	Internet and external
2	*Aloe bardadensis* /SFK-2/Herb	Kanwar boti	Asphodelaceae	Leaves	Oil, paste, Juice	It is an effective herb for the digestive system, wound healing, weight loss and hair problems. Most used remedy: 1) Boil the aloe vera leaves for two hours. When the mixture melts, mix glycerin in it. After cooling, store it and use it as soap. This aloe vera-made soap is best for acne and allergy due to its antibacterial properties.	One time daily but for acne skin, use aloe vera soap twice a day.	Both internal and external
3	*Fagonia arabica* /SFK-3/herb	Dhamasa	Zygophyllaceae	Whole parts	Ash, powder paste, infusion	It is used to treat cancer, also called cancer herb. Further, it prevents Hepatitis, allergies, Skin problems, gum disorders, asthma, Hepatitis, stomach problems, leprosy, fever, and wounds healings.	Maximum use 2- 5 grams According to hakeem's suggestion	Internal and external
4	*Calotropis giganta*/ SFK-4/ Shrub	AaK	Apocynaceae	Root, seed and bark	Ash, tincture	Joint pain, skin diseases, tumors, wounds, and parasitic infections.	Paste or ash of small size, like the size of a pea, should be used in a single day.	External, do not use it internally because it is very poisonous. Not for children.

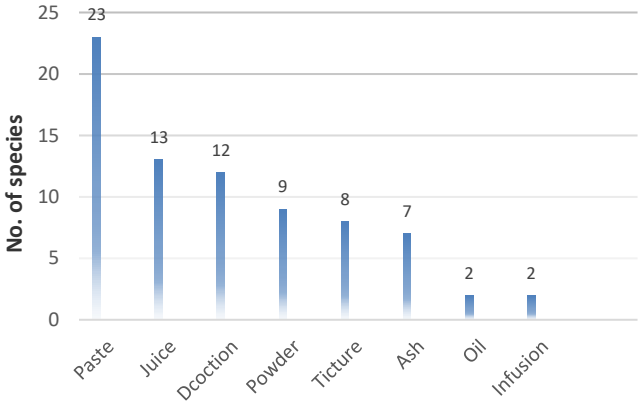
Sr.	Bot. name /voucher no. /habit	Common name	Family	Plant part used	Preparation method	Therapeutic Use	Dosage	Mode of application
5	*Cordia myxa*/SFK-5/Shrub	Lasora	Boraginaceae	Fruit	Powder	Chest, cough, urinary disorder, and ulcer.	Two spoons of fruit pulp daily	Internal
6	*Cassia fistula*/SFK-6/Tree	Amaltas	Fabaceae	Bark. leaves, flowers	Paste, fruit, Decoction	*Cassia fistula is* used against kidney stones, laxative, dysentery and blood poisoning.	Paste and decoction should be taken one time daily.	Internal and external
7	*Murraya Koenigii*/ SFK-7/ Herb	Meetha	Rutaceae	Root, bark	Tincture, juice, paste, decoction	Piles, cuts, skin allergy, skin whitening and dysentery Most used remedy: Villagerswomen make a decoction of their leaves by grinding their leaves, and its decoction is given in snakebite.	1-2 teaspoons in a day.	Internal and external
8	*Sapindus muskorossi*/ SFK-8/ Tree	Reetha	Sapindaceae	Fruit	Paste	It is the best tree used for hair growth and eliminates head lice.	One time daily after 3 days or week	External
9	*Albizzia lebbeck*/SFk-9/ Tree	Sarieen	Fabaceae	Leaves, bark	Decoction, paste	Most used remedies: 1- Women take 10 g of ground bark of *Albizzia lebbeck* and mix in about 200 ml water. After 8 hours, they drink 1/3 glass of water to eliminate waste products. 2- Boils *Albizzia lebbeck* leaves with *Azadiracta indica* leaves in small water and stir them. Wash the bites of venomous animals and insects by this water.	According to Hakeem suggestion.	Internal and external
10	*Phyllanthus emblica*/SFK-10/Tree	Amla	Phyllantaceae	Whole plant parts	Juice, paste, powder	It is best for hairs problems, eyes and the nervous system Most used remedy: It is best remedy for eyesight. Take half tsp of amla powder and mix it in water; after 7 hours, filter this water. Then wash eyes with amla water.	1 teaspoon paste or juice	External
11	*Peganus harmala*/ SFK-11/Herb	Harmal	Nitrariaceae	Whole herb parts	Paste, ash	It is used as a hallucinogen, to kill lice and a sedative.	Few leaves	External
12	*Citrus limetta*/SFK-12/Tree	Mithra	Rutaceae	Fruit	Juice	Daily use of its juice can save from influenza and vomiting.	Juice of 4 *citrus Limetta* Daily	Internal
13	*Vachellia nilotica*/SFK-13/Tree	Keekar	Fabaceae	Leaves, bark, seeds	Paste, ash, powder	Used to treat gums, joints, allergy and teeth.	According to Hakeem suggestion	External
14	*Ficus benghalensis*/ SFK-14/ Tree	Bargad	Moraceae	Bark, leaves	Decoction, ash	It is used to treat vaginal infection, fatigue, prevent depression and hair growth. Most used remedy: Soak mixture of *Ficus benghalensis* leaves in linseed oil, massage slowly on head, after 2 hours wash your head. It causes hair regeneration.	3-5 grams	Internal and external
15	*Ziziphus jajuba*/ SFK-15/Shrub	Bair	Rhamnaceae	Leaves and Fruits	Paste, powder, oil	Hair growth, liver cancer, wounds healing as well as aging.	1 tsp daily	Internal and External
16	*Syzygium cumin*/ SFK-16/ Tree	Jaman	Myrtaceae	Fruit	Powder, juice, decoction	It is used in diabetes, ulcer, asthma, dysentery, vision, and improving immunity.	Two teaspoon daily	Oral
17	*Dalbergia sisso*/ SFK-17/ Tree	Tali	Fabaceae	Leaves, Bark	Paste, decoction	It is used in dysentery, skin disorders as well as wounds.	According to Hakeem suggestion	Internal and external
18	*Bauhinia variegate*/ SFK-18/ Tree	Kachnar	Fabaceae	Whole plant	Paste, powder, decoction	It is best antidote against snake poisoning, further used against tumor, diabetes.	1 teaspoon daily	Internal and external
19	*Punica granatum*/SFK-19/Shrub	Anar	Lythraceae	Fruit and bark	Juice, tincture	People use its bark to treat piles and dysentery and juice to lowers blood pressure and improving immunity.	One *punica granatum* daily	Oral and external
20	*Haridra curcuma*/ SFK-20/Herb	Haladar	Zingiberaceae	Rhizome	Decoction, paste powder	This herb is used as anti-inflammatory, epilepsy, blood purifying as well as antiseptic agent. Most used remedy: Mix half tsp of *Haridra curcuma* with two tsp rice flour and two tsp gram flour. Then add 1/3 cup of water in it and make a mixture. After this add two drops of honey and apply this mask on face for 15 minutes. It causes skin whitening.		
21	*Ferula asafoetida*/ SFK-21/Herb	Heeng	Umbelliferae	Root	Juice, paste	It is best in epilepsy, influenza, stomach problems, whooping cough, as well as some nervous disorder.	According to Hakeem suggestion	Internal and external
22	*Chrysopogon zizanioides*/SFK-22/Herb	Khash khas	Poaceae	Root, Rhizome	Oil, juice, decoction	*Chrysopogon zizanioides* used for skincare because of its antiseptic properties, by grinding its roots, soap is prepared for acne skin. Its juice is beat against cough, muscles and joint pain.	Few grams according to Hakeem suggestion	Internal and external

Sr.	Bot. name /voucher no. /habit	Common name	Family	Plant part used	Preparation method	Therapeutic Use	Dosage	Mode of application
23	*Achyranthes aspera*/SFK-23/Herb	Puthkanda	Amaranthaceae	Whole plant parts	Juice, paste	Fever, cough, cold, fistula, rheumatic pain and rashes.	Should be used for small duration, 2 tsp juice daily.	Internal and external
24	*Polyalthia longifolia* /SFK-24/Tree	Ashoka	Annonaceae	Root, bark, leaves	Decoction, paste	*Polyalthia longifolia* used by local people to treat fever, cancer, teeth, digestive disorders as well as live disorder.	Few grams according to Hakeem suggestion	external
25	*Euphorbia helioscopia*/SFK-25/Herb	Gandi booti	Euphorbiaceae	Whole parts	Paste	It is effective to treat asthma, tumors and skin diseases.	Dosage depends on age factor and nature of disease.	external
26	*Datura stramonium*/SFK-26/Herb	Dhatura	Solanaceae	Seeds, flowers	Juice, paste, powder	It has analgesic, anti-inflammatory as well as anthelmintic properties, used to treat pain, Parkinson's and skin disease. Women used its paste to cure falling hairs.	Excessive dose can cause death, so it should be used according to herbalist.	external
27	*Pongamia pinnata*/SFK-27/Tree	Sukh Chain	Fabaceae	Whole plant	Paste, juice, powder	It is used to cure teeth, gums problems, eczema and osteoarthritis. **Most used remedy:** Mix 1/3 teaspoon *Pongamia pinnate* powder with small amount of honey and used it to cure cough.	1/3 teaspoon twice a day	Internal and external
28	Psidium guajava/SFK-28/Shrub	Amrod	Myrtaceae	Fruit, leaves	Tincture , juice	It is used in curing diabetes, heart problems, skin problems, weight loss and it helps to improve immunity (it is a rich source of vitamin C).	3 teaspoon juice daily	Internal and external
29	*Carissa carandas*/SFK-29/Shrub	Karonda	Apocynaceae	Leaves, fruit	Tincture, juice, paste	It is one of best fruit which helps for digestion. Further it is used to treat ailments like kidney disorders, stomach pain, diarrhea, nausea, and wound healing. **Most used remedy** To treat constipation, mix half cup of *Carissa carandas* in 2 glass of water in a blender. After 3 minutes a juice will prepared. Drink this juice, you will feel free against constipation.	1/3 cup one time in a day	Internal and external
30	*Mangifera indica*/SFK-30/Tree	Mango	Anacardiaceae	Root, leaves, bark, seeds	Juice, tincture, paste	One of the best fruit that slow down aging. It is best for heart patient because it maintain heart rhythm. Mangoes contain polyphenols that is best to treat cancer. Mango contain amylase enzyme which is helpful in digestion. Mangoes contain lot of vitamins. These vitamins are best for improving immunity.	2 slices of one mango daily but not good for diabetic patient	Internal and external
31	*Senegalia modesta*/SFK-31/Tree	Phulai	Fabaceae	Leaves	Tincture, paste	It is used to treat bacterial infection.	Few grams	External
32	*Salvadora oleoides*/SFK-32/Tree	Jaal	Salvadoraceae	Leaves, root, fruit	Decoction, infusion, paste	It is used as toothpaste and helpful to treat allergies, menstrual problems and poisonous bites of insects.	Few grams in a week	Internal and external
33	*Prosopis cineraia*/SFK-33/Tree	Jhand	Fabaceae	Bark, flowers	Ash, paste	Women in villages mix its flowers with sugar, and used this paste during pregnancy, because its save from miscarriage. The barks is burn when ashes are formed, these ashes are used as a hair removal. Villagers' women often used its pods against snake venom.	According to disorder nature	Internal and external

Table 2. Total use of each plant parts

Name of plant parts use	Total no. of plants parts use by informants
Leaves	14
Seed/ Fruit	13
Bark	12
Root	8
Whole parts	6
Flower	3
Rhizome	2

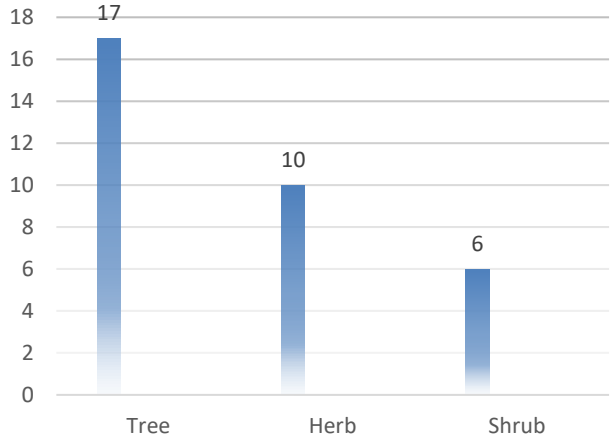
The most commonly used plant part for medicinal purposes was reported to be the leaves. The leaves of 14 different plant species were used to treat various diseases



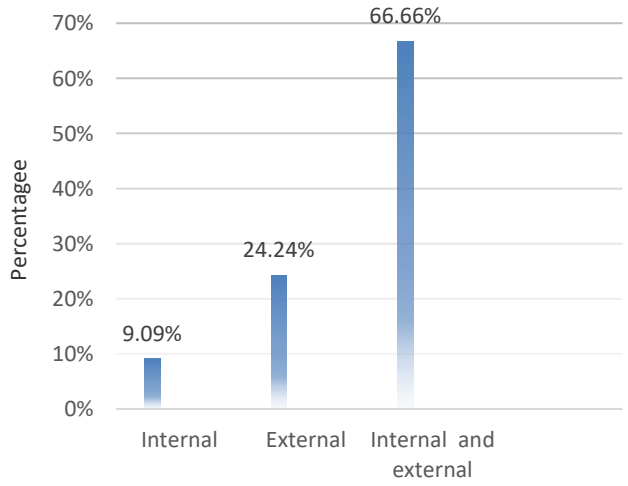
Graph 2:Preparation mode of plants

Table 3. Mode of application of plants.

Internal use of plant species	%age	External use of plant species	%age	Plant species used by both ways (internal and external)	%age
3	9.09	8	24.24	22	66.66



Graph 3: Plants Habit



Graph 1: Mode of application

***Use Value*:** Calculation of use value was performed by a formula; UV=∑Ui/N where Ui indicates use report number of plants that utilized by one informants while N explains total informant were interviewed with regard of particular plant. Use value describes the significance of most useful plants in an area. *Azadiracta indica* shows higher use value (0.95) while *Senegalia modesta* shows less use value (0.03) than other plants.

***Relative frequency of citation*:** This factor helps to identify the plants with maximum medicinal value in a specific area. It means, it indicates those plants that were beneficial against various disorders. It is determined by, RFC=FC/N

FC = frequency of citation (indicates species important by informants); N = Total informants of survey.

In this study *Fagonia arabica* shows higher relative frequency of citation (0.97) while *Senegalia modesta* shows lower relative frequency of citation (0.02).

Table 4. (Analysis of plants by using Use Value Formula and Frequency of Citation)

Names	Ui	UV	FC	RFC
Azadiracta indica	83	0.95	84	0.96
Aloe bardadensis	70	0.80	65	0.74
Fagonia Arabica	81	0.93	85	0.97
Calotropis giganta	67	0.77	65	0.74
Cordia myxa	62	0.71	59	0.67
Cassia fistula	35	0.40	39	0.44
Murraya Koenigii	60	0.68	57	0.65
Sapindus muskorossi	68	0.78	80	0.91
Albizzia lebbeck	80	0.91	76	0.87
Phyllanthus emblica	79	0.90	77	0.88
Peganus harmala	22	0.25	19	0.21
Citrus limetta	60	0.68	61	0.70
Vachellia nilotica	65	0.74	70	0.80
Ficus benghalensis	60	0.68	53	0.60
Ziziphus jajuba	62	0.71	64	0.73
Syzygium cumini	61	0.70	65	0.74
Dalbergia sisso	59	0.67	63	0.72
Bauhinia variegate	53	0.60	51	0.58
Punica granatum	54	0.62	52	0.59
Haridra curcuma	65	0.74	63	0.72
Ferula asafetida	54	0.62	51	0.58
Chrysopogon Zizanioides	56	0.64	54	0.62
Achyranthes aspera	4	0.04	3	0.03
Polyalthia longifolia	24	0.27	19	0.21
Euphorbia helioscopia	50	0.57	48	0.55
Datura stramonium	24	0.27	28	0.32
Pongamia pinnata	47	0.54	17	0.19
Psidium guajava	49	0.56	44	0.50
Carissa carandas	81	0.93	82	0.94
Mangifera indica	55	0.63	78	0.89
Senegalia modesta	3	0.03	2	0.02
Salvadora oleoides	4	0.04	3	0.03
Prosopis cineraia	50	0.57	37	0.42

***Information consensus factor*:** Each disease category was mentioned, and all of the species used to treat a specific disease were recorded. Informants recorded use citations for each category. This factor computes the species used against various disease categories. Higher ICF indicates greater use

of species for various disease categories, while lower ICF indicates less use of species. Skin disorders show higher information consensus value (1.05) while Heart disorder shows lower information consensus value (0.87).

$$ICF=(nur-nt)/(nur-1)$$

where nur denotes the maximum number of citations used by an informant against a specific disorder category and nt denotes the number of species used against that disorder category.

Table 5. Information consensus factor of use of plants in district Layyah

Sr.	Plants used against different disorders	All species	Use citations	Information consensus factor (nur-nt) /(nur-1)
1	Skin disorders	10	430	1.05
2	Hair disorders	7	320	0.98
3	Cancer	7	190	0.96
4	Stomach and digestive disorders	6	111	0.95
5	Wound healing	5	85	0.95
6	Cough	5	76	0.94
7	Teeth and hum disorders	5	69	0.94
8	Fever	3	31	0.93
9	Eye disorder	3	21	0.90
10	Heart disorder	2	9	0.87

DISCUSSION

All developed countries are attempting to use their resources to meet human needs. As a result, the use of medicinal plants is becoming more popular. Pakistan is a God-given country in terms of medicinal plants. Because the medicinal plants of district Layyah had not been fully identified, this ethnobotanical study was organised with the assistance of various locals as well as Hakeems from district Layyah. Climate conditions have a significant impact on plants. Threats to biodiversity increase during extreme weather conditions. Greater biodiversity has resulted from the great diversity of climate conditions (Noman *et al.,* 2013).

District Layyah receives less rainfall, but the land is very fertile, with many herbs, shrubs, and trees. There are also xerophytes, halophytes, and woody plants. Skin disorders, Hair disorders, Cancer, Stomach and digestive disorders, wound healing, Cough, Teeth and gum disorders, Fever, Eye disorders, and Heart disorders are all treated with medicinal plants obtained from the Layyah district survey.

Leaves were used more than any other plant part. This is because many active medicinal constituents were discovered in the leaves (Jadid et *al.,* 2020). The overwhelming majority of the species were trees. Herbs and shrubs are ranked second and third (Rahman, 2013). The findings of this study are consistent with previous research (Ahmad *et al.,* 2014). The majority of people used both internal and external medicine, but a few people only used plant-based medicine in one way, which could be internal or external (Shinwari, 2010). Locals used medicinal plants in a variety of ways (decoction, powder, extract, paste, tincture, juice and oil). Plant paste is most common mode of preparation and juice was second most common mode of preparation by local people of district Layyah.

In comparison to the other families, the Fabaceae were declared the dominant family. The Fabaceae family contains some important medicinal plants, and these findings are consistent with an ethnobotanical study conducted by Tufail (2020).

Azadiracta indica had the highest use value among the 106 species studied, while Sengalia modesta had the lowest. Because of the high use value of Azadiracta indica, more research into its active chemical constituents is required. The medicinal value of this plant is an established fact (Naheed *et al.,* 2020).

During interviews and discussions with locals and Hakeems, it was surprising that a herb called fagonia arabica was cited with a high relative frequency. Another intriguing fact about fagonia Arabicav has been discovered: it is a very effective herb for cancer treatment. The people of Layyah district referred to this herb as a cancer herb. As a result, more research on Fagonia arabica is needed to determine its active constituents in greater detail.

***Conclusion*:** During this survey, many new medicinal plants were discovered. It was the most beneficial survey on medicinal plants. Unfortunately, young people are far from using medicinal plants, so this ethnobotanical survey was greatly needed.

There is an urgent need to conduct ethnobotanical research in various areas of Pakistan. As a result, we can preserve our traditional knowledge as an asset. Otherwise, we risk losing our traditional knowledge of medicinal plants, which could be devastating. Azadiracta indica and Fagonia arabica should be studied in depth for further medicinal discovery due to their higher medicinal uses.

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