

# Khwaja Yunus Ali University Journal

Publisher homepage: [www.kyau.edu.bd](http://www.kyau.edu.bd)

**OPEN ACCESS**

**ISSN: 2521-3121 (Print)**

Journal homepage: [www.journal.kyau.edu.bd](http://www.journal.kyau.edu.bd)



## Research Article

### Ethnomedical Study of Traditional Healer in Belkuchi and Chauhali Upazila of Sirajgonj District of Bangladesh

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#### Abstract:

*The primary goal of this research was the compilation of a list of medicinal plants in the Sirajganj district, utilized in the treatment of various diseases by folk practitioners. This was done by conducting a survey of the residents of different sandbars and banks along the river Jamuna. Most of the people who live on the sandbar are gipsy in nature and come from different regions of Bangladesh due to having lost their residence. Most of the people are poor and have very limited capacity to bear the expenses of the modern treatment facilities. They are mostly dependent on their traditional knowledge of medicine and use plant resources to combat the diseases. Sometimes people get suggestions from professional medicinal practitioners who are commonly known as kaviraj. Traditionally, it was observed that elderly*

*people who lived on the sandbar or bank of the river had a rich knowledge of medicinal plants. Method: Both structured and open-ended questions were prepared both in English and Bengali. A list of practitioners was prepared and selected most renowned personnel from them for interview. A trained interviewer was asked the question among the selected practitioners and recorded accordingly. From the survey results, 31 plants from 24 families were identified. The local name was compared with the common name of the medicinal plants' database and identified their botanical nomenclature. It was observed that most of the plants were in the family of liliaceae, caesalpiaceae, anacardiaceae, myrtaceae, and fabaceae. This survey study was a unique contribution to the treasury of the natural medicinal database of Bangladesh.*

**Keywords:** Folk medicinal practitioner, Family names, Medicinal plants, Common Disease, Treatment

#### 1. Introduction:

Ethnobotany is the exploration of a continent's plant life and its different elements of use based on local civilization and dwellers' traditional knowledge. Plants are the oldest and the most crucial supply of drugs (Kochhar, 2016). Indigenous use of plants and various aerial parts or elements of plants has been depth realistic information inside numerous subcultures and

livelihoods of people living in far-flung corners of the globe (Rahman, 2015). Plants are the idea for the improvement of current capsules, and medicinal plant life had been used for decades in everyday lifestyles to deal with sickness all around the world (Patil *et al.*, 2014). As per the World Health Organization (WHO), approximately 65% of the global populace and 80% of the growing countries' populace rely mostly on approximately

85% of plant-derived conventional drugs (Cragg and Newman, 2013).

Natural products and their derivatives constitute over 60% of all capsules clinically used worldwide, wherein herbal merchandise from medicinal plant life makes up for 25% of general capsules (Ameenah, 2011). Despite the present obsession with artificial chemistry as a means of discovering and manufacturing capsules, plant life continues to make a significant contribution to disease treatment and prevention. Even before the dawn of the twenty-first century, 11 per cent of the 252 capsules deemed essential and important by the World Health Organization (WHO) were plant-based (Ciddi, 2012). Most current information discovered from the record posted by the Royal Botanic Gardens, Kew, within the United Kingdom in their "State of World's Plants" that there are approximately 391,000 species of vascular plant life presently regarded by science, of which approximately 369,000 species (or 94%) are flowering plant life. The record also provides, for the first time, baseline facts on all vascular plant life (besides algae, mosses, liverworts, and hornworts) which have specialized tissue to move meals and water (Willis, 2017).

The Food and Agriculture Organization predicted in 2002 that over 50,000 medicinal plant species are used throughout the world, while it was more conservatively predicted in 2016 that 17,810 plant species have medicinal use, out of a few 30,000 plant species for which use of any type is documented (Scirp.org. 2016). Moreover, approximately 2000 new plant species are found or defined each year. Tribal human beings are the actual custodians of medicinal plant life worldwide. Considering the monetary condition, using conventional drugs has its significance in Bangladesh (Basak *et al.*, 2016). All cultures have traditions of folklore medicine that encompass using plant life and different ethnopharmacological issues (Guha and Chakma, 2015). Ancient tribal human beings have used plants for therapy for quite a few ailments.

However, they do not preserve transferable information, as facts are generally handed on verbally from technology to technology (Guha and Chakma, 2015). Bangladesh is a subtropical country wealthy in biodiversity and organic

resources, with an extended record of the use of medicinal plant life for the remedy of various kinds of diseases. From historic times, tribal and people's practitioners performed their important functions within the nearby healthcare system. In the existing examination, conventional practitioners who lived on a specific sandbar or the financial institution of the Jamuna River were interviewed to acquire their medicinal information. Two upazila (belkuchi and chauhali) of sirajgonj were selected for this study.

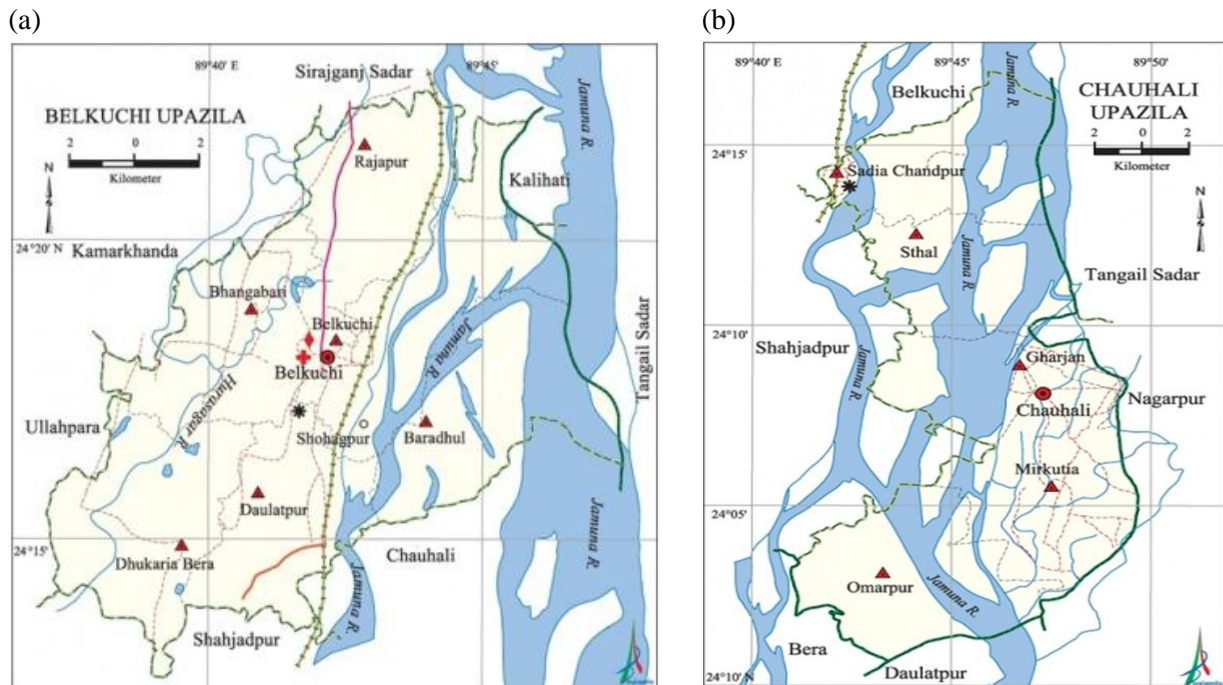
### 1.1 Geography of Belkuchi and Chauhali Upazila:

According to Islam (2003), Chauhali and Belkuchi are two adjacent Upazila of the Sirajganj district in the division of Rajshahi, Bangladesh. Belkuchi upazila has an area of 164.31 sq. Km, located in between 24°13' and 24°22' north latitudes and in between 89°37' and 89°47' east longitudes. It is bounded by Sirajganj Sadar Upazila on the north, Shahjadpur and Chauhali upazilas on the south, Kalihati and Tangail Sadar Upazilas on the east, Kamarkhanda and Ullahpara upazilas on the west (Fig.1.a). It is famous for handloom cottage industries and Shohagpurhutt. Belkuchi has a very plain land containing two main rivers, jamuna and hurasagar and an important water body known as Chandnibeel. Belkuchi has 6 unions/wards, 108 mauzas/mahallas, and 143 villages. As per the 2011 Bangladesh census, belkuchi has a population of 352835. Males constitute 179738 of the population, and females 173097, muslim 284129, hindu 18473, buddhist 52 and others 24. Belkuchi has an average literacy rate of 33.6% (7+ years), and a national average of 32.4% literate (Islam, 2003).

Chauhali upazila has an area of 243.67 sq km, located in between 24°01' and 24°17' north latitudes and in between 89°41' and 89°59' east longitudes. It is bounded by belkuchi upazila on the north, bera and daulatpur (manikganj) upazilas on the south, tangailsadar and nagarpurupazilas on the east, shahjadpur' and bera' upazilas on the west (figure 1.b). It is famous for the enayetpurdarbar sharif, KhwajaYunus Ali University and The KhwajaYunus Ali Medical College and Hospital and The KhwajaYunus Ali Nursing College. Chauhali has 7 unions, 153 mauzas/mahallas, and 101 villages but most of the area of this upazilais

now under the water of Jamuna due to continuous breaking of the bank of Jamuna. As per the 1991 Bangladesh census, Chauhali has a population of 108459. Males constitute 51.37% of the population, and females 48.63%. Chauhali has an average literacy rate of 23.1% (7+ years), and a national average of 32.4% literate (Islam, 2003). A large portion of both of the Upazila are in the Jamuna River and contain hundreds of small to medium sandbars suitable for the living population. Most of the peoples live in such

sandbar are settler from the adjacent district and their main source of earning are fishing, farming animals and slightly farming. Intercultural mixing and lack of living facilities make them self sufficient for producing living instruments including treatment facilities. Most of the people who live in the Sandbar of Jamuna were observed with rich knowledge of medicinal plants for self medication for common diseases. However, some people take this as their profession and renowned as the same name of Kaviraj in their locality.



**Fig.1:** Location of (a) Belkuchi and (b) Chauhali Upazila in Sirajgonj District, Bangladesh. (Islam, 2003)

## 2. Materials and Methods:

A cross-sectional survey was conducted by face-to-face interview by using a structured questionnaire from December 2017 to February 2018. People who lived in the sandbar and/or the riverbank of the Jamuna were the targeted group in this study. A list of medicinal practitioners introduced by others was prepared. Among them, a list most renowned medicinal practitioner were identified and conducted for their interview. Some of them did not show their interest to participate in the survey and were duly eliminated from the list. Personnel who were winningly participated and cooperate with the interviewers were finally selected for the study. Finally, five practitioners were selected for this study and conducted at least three sessions for their interviewing. An in-

depth personal conversation session was conducted based on a previously prepared and approved prescribed questioner. To overcome the barrier of the local language, an interpreter was present during the survey.

The subjects were informed that they were free to decline to answer any question with which they were not comfortable. The anonymity of their identity was preserved. As this study was not involved in experimental research involving human subjects, ethical approval was exempted.

### 2.1 Questionnaire:

The questionnaire was included 8 questions describing name, age, sex, address, contact no, area of practice, experience, learning history, practicing type (charity/commercial) and their



specialty. The questionnaire was generated with a slight modification of Patterson and Arthurs' published questionnaire (Patterson and Arthurs, 2009). The questionnaire was translated into Bengali and necessary changes were made to make it understandable for the respondents before data collection in the field and backtranslated into English.

## 2.2 Selection procedure of the subjects:

Initially, 25 traditional practitioners were selected for the study and they were interviewed several times. Out of 25 only 14 were cooperative and supplied the relevant information regarding their treatment procedure. Few of the rest were not interested to expose their name and few were not wanting to expose their materials used for the treatment procedure.

All the practitioners are widely popular in their locality. People consult them for different diseases, and we tried to observe the patients dealing during the survey. Their technique/s are somewhat reliable in the sense of curing disease though there is no scientific evidence of such treatment.

## 3. Result and discussion:

From the survey it has been observed that traditional practitioners are used different types of treatment procedures including medicinal plants, blowing water (pani-pora), blowing oil (telpora), removing spiritual possession (jhar-fuk), providing amulets (tabiz), and sucking for removing the poison. As per our study, we did not find any scientific ground for believing such a treatment procedure (except some medicinal plants), however, still, pharmacological curing has been observed. But, this type of traditional healer is not an expert of wide types of diseases, most of the cases they were found to be specialists in 2 to 10 different type of diseases. But they are confident and the people who came to them were also depends on their treatment procedure. Far differences in using medication were observed between the listed practitioners and most of them have their stream of

knowledge. Practitioners acquired medical knowledge from their elder family members such as father, mother, grandfather, grandmother, or close relatives. They have no written manuscript for a treatment procedure, and they did not follow the same treatment for all similar patients. That is, their treatment procedure is patient-specific rather than disease-specific which is observed in the modern treatment system. Most of the surveyed traditional practitioners in this study were observed to be strict in mixing their acquired knowledge with the modern treatment system and not interested to learn the process used by other practitioners in their locality. Variation was observed of naming and using parts of the medicinal plants. After comparison, few plants have been identified as the well-known traditional plants used by different parts of the world. Their approaches of preparing medication are somewhat connected to the preparation procedure of ayurveda, unani, siddha, traditional chinese medicine (TCM) etc.

During the survey period, some interesting ethnomedical practices were examined and as per patient's compliance, satisfactory improvement was observed. The observed procedures are described and enlisted as per their briefing in **Table-1**. The practitioners were also provided information on curing different types of disease which are also summarized in **Table-2**. From the survey, 31 different medicinal plants of 24 families were isolated. The most abundant families were liliaceae and caesalpiniaceae, which contained three medicinal plants whereas anacardiaceae, myrtaceae and fabaceae contained 2 plants respectively. One plant was found from the gramineae, malvaceae, nymphaeaceae, bombacaceae, solanaceae, zingiberaceae, amaranthaceae, rutaceae, moringaceae, labiatae, asclepiadaceae, meliaceae, thymelaeaceae, caricaceae, cucurbitaceae, papilionaceae, rubiaceae, chenopodiaceae, palmae family. Most of the plants mentioned by the traditional practitioners of belkuchi and chauhali upazila were

matched with the medicinal plant database and found appropriateness of their selection.

**Table- 1: Treatment evidence of curing or improving the status of different diseases treated by the practitioners observed during the survey**

Number of traditional practitioners	Professional experience (in years)	Disease to treat	Procedure
1.	15	Snakebite	The juice of the green data tree will rub in the wound Wash the cracked area with boiled water from the data tree. Rub the juice of the bell leaves & the leaf of bandorlathi will rub in the cracked area.
		Paralysis	Bath the patient with the boiled water of the root of the sajina tree and ram tulshi.
2.	12	Ghost influence/ devine influence	Blowing water (pani-pora), removing <i>spiritual</i> possession ( <i>jhar-fuk</i> ) and providing amulets (tabiz)
		Pain relief from chest, shoulder, back pain, head	Removing <i>spiritual</i> possession ( <i>jhar-fuk</i> )
3.	3	Dog bite	Juice of akanda tree + molasses
4.	32	Ghost influence/ devine influence	Blowing water (pani-pora),removing <i>spiritual</i> possession ( <i>jhar-fuk</i> ) and providing amulets (tabiz )
		Diarrhoea	Removing <i>spiritual</i> possession ( <i>jhar-fuk</i> )
		Fever of children	Rubbing oil of korpur or mustard. Also taken orally one-two drops of that oil,
5.	3	Jaundice	Juice of one special types of tree (not mentioned) + lime + cupper dish + removing <i>spiritual</i> possession ( <i>jhar-fuk</i> ) + water + bark of mango tree
6.	32	Contraceptive	<i>Juice of shornolata</i> <i>Bud of jaba flower twice a day</i>
		Rapid urinary / vaginal discharge	<i>Bud of jaba (hibiscus) flower twice a day</i>
7.	5	Inflammatory leukorrhea	The juice of the green part of the gardenia (gondhorajflower) twice a day
		Mouth shore	The leaves of the guava tree should be chipped 2-3 times a day Rub the leaves of neem tree on gum
8.	50	White leukorrhea	Boiled water of durbaghas (bermuda grass) to drink twice a day
		Inflammatory leukorrhea	Tablet of durbaghas (bermuda grass) + raktoshapla (crimson water lilies) + red sandalwood
		Vaginal infection or STD	Mixture of shatamul (asparagus) + root of shimul (red cotton tree) + salammishri + tamarind seed + yashtimadhu (liquorice root) + bkack plum (jamun) seeds
9.	2	Ear pain	Apply the juice of onion + zinger in the ear
		Hair fall	Apply the juice of onion
		Fever + cold	Eat lotkon fruit (burmese grape), message mustard oil and a few drops will ingest orally
		Tonsil	Removing <i>spiritual</i> possession ( <i>jhar-fuk</i> )
10.	8	Miscarriage	Tie agor wood with the body
		Bone fracture	Removing <i>spiritual</i> possession ( <i>jhar-fuk</i> )
		Jaundice	Removing <i>spiritual</i> possession ( <i>jhar-fuk</i> )
		Dysentery	Drink the juice of onion
11	6	Urinary problem, jaundice	Feed meshed seeds of spinach and juice of leaves twice a day

12	10	Worm	Drink juice from seeds of pumpkin + topapana (water lettuce)
		Diabetes	Drink the juice of different parts of telakochu (ivy gourd) twice a day.
		Skin disease (psoriasis)	Apply juice of bean tree
		Teeth decay	Areca nut (supari) chewing Apply gum of shajina (moringa tree) + jeol tree (indin ash tree)
13	15	Tonsil, leg pain, rheumatic fever	Removing spiritual possession (jhar-fuk)
14	15	Snakebite	Removing spiritual possession (jhar-fuk) Sucking poison Feeding juice of banorlathi (golden rain tree, canafistula) + apply gum of papaya tree

**Table -2: List of Medicinal plants occasionally used for the treatment of different types of diseases**

S L	Scientific name	Family	Local name	Used part	Scientific evidence of medicinal property
01	<i>Cynodondactyl</i> on Pers.	Gramineae.	Durba, Durbaghas, Dubla, Couch Grass (Eng.)	Whole plant.	Bruised juice of <i>Cynodon dactylon</i> with the bark juice of <i>Mangifera indica</i> is used in the treatment of misbirth or miscarriage. This mixed juice is given to drink twice a day (2 cups). Plant extract is used to treat a bleeding cut, inflamed tumours, piles, whitlows, bacterial/fungal attacks.
02	<i>Mangifera indica</i> Linn.	Anacardiaceae.	Aamgach, Aam, Mango (Eng.)	Bark, Leaf, Fruit.	Bark juice with the juice of <i>Cynodon dactylon</i> is used in misbirth. Extract of immature leaf possesses anthelmintic, febrifuge, antidiarrheal properties. Barks and kernel of seeds are astringent and used in haemorrhages and diarrhoea. Kernel of seed has anthelmintic properties. Fruit is used to treat dysentery. Kernel and bark juices are used in menorrhagia.
03	<i>Hibiscus rosa-sinensis</i> Linn.	Malvaceae.	Joba, China Rose (Eng.)	Flower	The flower is used in menstrual disorders, menorrhagia, and leucorrhoea. The flower is given to the patient to eat. The flower is also used in vaginal and urinary discharges, sexual disorders, bleeding piles, dysentery.
04	<i>Syzygiumcumini</i> (Linn.) Skeel.	Myrtaceae.	Kalojam, Jam, Black Plum, Indian Blackberry (Eng.)	Seed, Fruit, Leaf.	Decoction of bark is used as a mouthwash and gargle. Barks and leaves are used in dysentery, are astringent. The fruit pulp is nourishing, stomachic, carminative and diuretic. Fresh seeds are used in the treatment of diabetes, reduce blood sugar
05	<i>Pterocarpussantalinus</i> L.f.	Fabaceae.	Roktochondon, Red Sandalwood (Eng.)	Flower Seed.	Flower along with other flowers i.e., <i>Bauhinia purpurea</i> , <i>Hibiscus rosa - sinensis</i> , <i>Nymphaea stellata</i> , <i>Croton tiglium</i> (seed oil), are used to make pill in the treatment of leucorrhoea, menorrhagia, the pill is given to the patient 2-3 times per day.

06	<i>Nymphaea stellata</i> Willd.	Nymphaeaceae.	Roktoshapla Blue/Red Water Lily (Eng.)	Rhizome, Flower	Flower and rhizome along with other flowers are used to treat leucorrhoea, menorrhagia already mentioned above. Paste of seeds is also used in the treatment of various skin diseases. Rhizome also has astringent, antiseptic, demulcent, diuretic properties, used in piles, diarrhoea, dysentery and dyspepsia.
07	<i>Bauhinia Purpurea</i> Linn.	Caesalpiniaceae.	Rokto Kanchan, Kanchan, Butterfly Tree (Eng.)	Flower	Flower along with other flowers is used in menorrhagia, leucorrhoea mentioned above. It is also used in the treatment of anasarca, dropsy, pain, rheumatism, animal bites, septicaemia.
08	<i>Asparagus racemosus</i> Willd.	Liliaceae.	Shatamuli, Shatamul, Asparagus (Eng.)	Root, tuber, Leaf.	Root and leaf of this plant, are used with roots of <i>Bombax ceiba</i> , <i>Mucuna pruriens</i> (roots, seeds), <i>Withania somnifera</i> , <i>Dioscorea bulbifera</i> (root and tuber), seed kernel (dry ground) of <i>Mangifera indica</i> , <i>Syzygium cumini</i> , candy of palm juice, pure honey to make a gelatin-like mixture (1-2 times per day) to treat sexual diseases.
09	<i>Bombax ceiba</i> Linn.	Bombacaceae.	Shimul, Shaktimul, , Silk Cotton Tree (Eng.)	Root.	The root is used by the practitioner along with other plant parts mentioned above to treat sexual diseases. Roots have stimulant, tonic and aphrodisiac properties and are given in impotence.
10	<i>Withaniasomnifera</i> Dunal.	Solanaceae.	Ashwagandha, Winter Cherry (Eng.)	Root, Leaf.	The root finds extensive use in all cases of general debility, consumption, senile debility, rheumatism, nervous tension, loss of memory. The root is used by the practitioner with other plant parts mentioned previously to treat sexual diseases and impotence.
11	<i>Glycyrrhizaglabra</i> Linn.	Fabaceae.	Yastimadhu, Liquorice (Eng.)	Leaf, Root.	It is used in bronchitis, dry cough, respiratory infections, genitourinary tract infections, abdominal pain, gastric ulcer, asthma. The plant root is used by the practitioner along with other plant parts to make gelatin i.e, <i>Zingiber officinale</i> (rhizome), <i>Piper longum</i> (fruit), candy of palm juice, culinary spices and seasons, mustard oil. This gelatin (2-3 times to be drunk) is used to treat asthma. It is a tonic sweet, antioxidant, expectorant, and antitussive, demulcent.
12	<i>Zingiber officinale</i> Rosc.	Zingiberaceae.	Ada, Ginger (Eng.).	Rhizome.	The rhizome is used as an adjunct to make gelatin by the practitioner to treat asthma. Infusion of the rhizome is used in the treatment of dyspepsia, vomiting, loss of voice, coughs, fever, cold, sore throat, constipation, dysentery, earache and headache.
13	<i>Amaranthus viridis</i> Linn.	Amaranthaceae.	Sobuj Data, Green Amaranth (Eng.)	Whole Plant.	Leaf juice of this plant along with leaf juice of <i>Aegle marmelos</i> , <i>Cassia fistula</i> , is used by the local practitioner to treat snakebite.
14	<i>Aegle marmelos</i> (Linn.) Corr.	Rutaceae.	Bael, Wood Apple (Eng.)	Fruit, Seed, Leaf, Bark.	The leaf juice of this tree is used by the local practitioner to treat snakebite, along with other plants leaf juice. Fruits are digestive, stomachic, laxative, astringent, and tonic. They are used in constipation and dysentery.

15	<i>Cassia fistula</i> Linn.	Caesalpinia -ceae.	Bandar lathi, Pudding Pipe Tree, Purgina	Leaf, Fruit.	Leaf juice is used by the local practitioner to treat snakebite. Ethanolic extract of pod and stem bark is hypoglycemic, antiviral and anticancer. Pulp of the fruit is a laxative, useful in chest and heart diseases.
16	<i>Moringa oleifera</i> Lam.	Moringaceae.	Sajmagach, sojne, Drumstick tree, Horse-Radish tree	Bark, Root.	Boiled water of root is used by the practitioner to treat paralysis. The root is used as a stimulant in paralytic affections, intermittent fever; epilepsy and as carminative, stomachic, diuretic, cardiac and circulatory tonic.
17	<i>Ocimum gratissimum</i> Linn.	Labiatae.	Ram Tulsi, Shrubby Basil (Eng.)	Leaf.	Boiled water of leaves of this plant is used by the local practitioner to treat paralysis. Aerial parts are used as a stimulant, demulcent, diuretic, carminative, digestive, anti-emetic, and styptic. Decoction of leaves is useful in seminal weakness and is used in the treatment of gonorrhoea and dysmenorrhoea.
18	<i>Aloe indica</i> Linn.	Liliaceae.	Ghritakanchan, Ghritakumari, Aloe (Eng.)	Leaf.	The local practitioner makes one kind of gelatin to drink to treat sexual diseases such as erectile dysfunction. The gelatin contains the juice of leaves of this plant along with the root of <i>Bombax ceiba</i> , extract of <i>Basella alba</i> , leaf juice of <i>Ocimum gratissimum</i> , bark juice of <i>Aegle marmelos</i> , extract of <i>Trapa bispinosa</i> , the ground seed of <i>Celosia argentea</i> and sugar candy. The gelatin is given once a day for 3 weeks.
19	<i>Calotropis gigantea</i> Linn.	Asclepiadaceae.	Boro Akanda, Gigantic Swallowwort, Mudar (Eng.)	Leaf, Flower	Dry ground flower with water is given two times by the local practitioner to treat asthma. Extracts and preparations of leaves and roots are used against abdominal tumours, cancers, dog bites, boils, syphilis, tuberculous leprosy, skin diseases, piles, wounds, rheumatism and insect bites.
20	<i>Allium cepa</i> Linn.	Liliaceae.	Piyanj, Onion (Eng.)	Bulb.	Mainly the bulb is used by the local practitioner to treat the common cold, catarrh. Juice obtained from the plant is rubbed on the head and smeared with the whole body with mustard oil. Fresh scaled onion is also eaten thrice a day. Onion juice is also used by the local practitioner to stimulate hair growth in the bald head. Onion juice with mustard oil is rubbed and applied on the heads of infants and children for a long time by the local practitioner in case of difficulty in the breath.
21	<i>Azadirachta indica</i> A. Juss.	Meliaceae.	Neem, Indian Lilac (Eng.)	Leaf, Bark, Seed.	The leaves of this plant are boiled and applied to skin infection of any part of the body. Ground juice of leaves and boiled water of leaves (as a gargle) are also applied to treat sore throat and gum diseases and any infection of the mouth (2 times a day). The boiled water is taken as a bath in case of skin infections. This is the treatment method of the local practitioner. The aerial bough of this tree is used as a good device for tooth brushing and tooth cleanser.
22	<i>Aquilaria malaccensis</i> Lam.	Thymelaeaceae.	Agra, Adaru, Agallochum, Agarwood (Eng.)	Leaf.	The leaf is used by the local practitioner to treat misbirth. Powdered wood is used as a perfume. Decoction of wood is used as a febrifuge, alterative, tonic, carminative, stomachic, laxative, diuretic and aphrodisiac.



23	<i>Carica papaya</i> Linn.	Cariaceae.	Pepe, Papaya, Papaw tree (Eng.)	Fruit.	Ripe fruit is used by the local practitioner to treat dyspepsia, constipation. One fruit is given two times a day. Fruits, latex and juice are digestive and are used in dyspepsia, intestinal irritation, habitual constipation and chronic diarrhoea (particularly the ripe fruits). Latex and juice of the green fruit induce abortion
24	<i>Coccinea cordifolia</i> (Linn.) Cogn.	Cucurbitaceae.	Telakucha, Ivy Gourd (Eng.)	Whole Plant.	Plant juice is used by the local practitioner to treat diabetes. Two to three cups are given to the patient daily. Various parts of the plant possess hypoglycaemic properties, ethanolic and aqueous extracts of sun-dried and de-fatted root powder are orally hypoglycaemic in rabbits; comparable to tolbutamide (JPPL, 1963; BMEBR, 1980) and is popularly used in the treatment of diabetes.
25	<i>Labiab purpureus</i> Linn.	Papilionace -ae.	Shim, India n Bean (Eng.)	Leaf.	The local practitioner uses the bruised fresh leaves of this plant to treat microbial skin infections. Leaves are regarded as alexipharmic (an antidote to poison) and emmenagogue. They cure ringworm and colic.
26	<i>Lanneacorom andelica</i> (Houtt.) Merr.	Anacardiacea e.	Jiga, Jika, Jeol, Indian Ash Tree (Eng.)	Gum, Bark.	Gum is used by local practitioners to treat gum diseases and skin eruptions. 1-2 spoon of tacky gum is inserted on the spot. The bark is astringent. Lotion of bark is used in leprous and obstinate ulcers and its decoction in toothache and mouth sores.
27	<i>Gardenia jasminoides</i> Ellis.	Rubiaceae.	Gondhoraj, Cape Jasmine (Eng.)	Bark, Root.	Root and bark are used by the local practitioner to treat excess bleeding, menorrhagia. Decoction and extract are used as antiseptics. Extract of aerial parts is antispasmodic, antiperiodic, cathartic, and anthelmintic and is externally used as an antiseptic. The root is used in the treatment of dyspepsia, nervous disorders, and hysteria. Fruits constitute an important ingredient of Chinese traditional medicine for chronic myelocytic leukemia.
28	<i>Spinacia oleracea</i> Linn.	Chenopodiace ae.	PalongShak, Garden Spinach (Eng.)	Leaf.	Urinary infection is treated by the local practitioner with the juice of fresh leaves of this plant (2 cups, by mouth, twice daily). The green plant is taken for urinary calculi and used as a mild laxative, emollient, demulcent, diuretic, and astringent.
29	<i>Areca catechu</i> Linn.	Palmae.	Supari, Betel nut palm (Eng.)	Fruit.	The nut, cut into small pieces, is given to chew to the patient with dental plaque, decay, inflammation of the gum, gingivitis. This is the treatment method of the local practitioner. Areca nut possesses antimicrobial activity and is an astringent, stimulant, and nervine tonic. It is also used as anthelmintic, emmenagogue and aphrodisiac and in case of urinary disorders.
30	<i>Tamarindus indica</i> Linn.	Caesalpinia- ceae.	Tentul, Tentulgach, Tamarind (Eng.)	Seed, Fruit.	The local practitioner uses the ripe fruit to make a drink, which is given to drink twice a day, to treat the common cold, catarrh. The fruit pulp is mixed with the leaf extract of <i>Coriandrum sativum</i> to eat enough, to treat asthma. Tamarind is a wholesome and cleansing fruit that improves digestion, relieves gas, soothes a sore throat, and acts as a mild laxative.

31	<i>Psidium guajava</i> (Linn.) Bat.	Myrt aceae.	Payara, Guava (Eng.)	Leaf.	Aerial fresh leaves are used by the local practitioner to treat ulcers, soreness in the mouth as well as lack of taste in the mouth. Aerial fresh buds are given to chew for several minutes 2-3 times a day. Other medicinal parts have numerous therapeutic effects such as astringency in bowels, wounds, and ulcers (leaves cholera for arresting vomiting and diarrhoea, and as a gargle in bleeding gums (decoction of leaves)
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#### 4. Conclusion:

The present survey was conducted among 25 randomly selected traditional healers in chauhali, and belkuchiupazila of the sirajgonj district of Bangladesh and it was amazing to observe that, their traditional expertise correlates with the scientifically (medicinal plant) proven database. An extensive survey is required to explore the knowledge of traditional healers spread in different places in Bangladesh.

#### 5. Conflict of interest:

The authors declare that they have no conflict of interest.

#### 6. Acknowledgements:

The authors gratefully acknowledge the local people of district Sirajgonj for sharing their traditional knowledge. Also thank the *Department of Pharmacy, KhwajaYunus Ali University*, and special thanks to Prof. Dr Mohammed Rahmatullah (Pro-Vice chancellor, University of development alternative) for supporting us through his valuable suggestions.

#### 7. Limitation:

Convincing the folk practitioner is very time consuming and difficult. We have to skip some practitioners for their unwillingness to provide data. Also, due to funding problems, we are unable to identify many plants.

#### 8. Funding:

The authors received no specific funding for this work.

#### 9. Author's contribution:

Sultana A conceived and developed the study design and manuscript preparation. Golam Rabbi G carried out the data collection of the survey. Both authors contributed to the analysis and interpretation

of results. Sultana A reviewed the results and approved the final version of the manuscript.

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**Citation:** Sultana A and Rabbi G. (2021). Ethnomedical Study of Traditional Healer in Belkuchi and Chauhali Upazila of Sirajganj District of Bangladesh. *KYAU Journal*.4(1),22-32