



Traditional Knowledge and Formulation of Medicinal Plants Used By the Herbal Practitioners in Puthia Upazila of Rajshahi District, Bangladesh

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Article History

Received: January 25, 2021

Revised: March 8, 2021

Accepted: March 11, 2021

Published: March 13, 2021

Abstract

Traditional medicine has remained as the most affordable and early accessible source of treatment in the primary healthcare system of resource. Medical Practitioners are in Puthia Upazila of Rajshahi District of Bangladesh. The medical practitioners have a long history of traditional plant usage for medicinal purpose. The present research on Traditional knowledge and formulation on medicinal plant use by the medical practitioners in Puthia Upazila of Rajshahi district of Bangladesh was recorded. Frequent field trips were made during January 2018 to December 2018 to record medico-botanical data by interviewing medical practitioners of various age groups, mostly ranging between 20 to 76 years, including medicinal healers (herbalists/hakims). A total of 127 plant species under 105 genera of 66 families have been documented which are used for the treatment of 96 categories ailments. For each species scientific name, local name, habit, family, ailments to be treated, mode of treatment and part(s) used are provided. The phytochemical analysis and pharmacological investigations of traditional medicinally important plants by taking in view their proper conservation too, would help in developing novel drugs to treat ailments.

Keywords: Medicinal plants; Traditional knowledge; Puthia; Rajshahi; Bangladesh.

1. Introduction

Plants have provided man with all his needs in terms of shelter, clothing, food, flavors and fragrances. Plants have formed the basis of system among traditional medicine which has given rise to some important drugs still in use today. Many ancient nations have awakened to the importance of herbal medicine which brings more cures. The existence and use of plants to treat diseases are as old as man. Man's dependence on plant has in no way decreased, yet there are comprehensive documentations of the plants, exploited for their medicinal uses in some parts of the plants such as leaves, stem and root. The decoctions of these plants are used in the treatment of some diseases such as urinary problems, diabetes, asthma, stroke, stomachache, hypertension, diarrhea and wounds [1].

Even today, traditional medicine is still the predominant means of health care in developing countries where about 80% of their total population depends on it for their well being. Plants are the basis for the development of modern drugs and medicinal plants have been used for many years in daily life to treat disease all over the world. However, the knowledge of medicinal plant is rapidly dwindling due to the influence of Western lifestyle, reducing in number of generations to carry on the use of plant species in traditional medicine which has increased the interest throughout the world. World Health Organization estimates that 70% of populations from many countries are using traditional of folk medicine to cure various ailments [2]. The main objective of this study is to identify and assess the indigenous knowledge of the medicinal plants present in Puthia upazila of Rajshahi district, Bangladesh.

2. Materials and Methods

Study Area: Puthia Upazilla (Rajshahi District) area 74.38 sq km, located in between 24°20' and 24°31' north latitudes and in between 88°51' and 88°85' east longitudes. It is bounded by Manda and Atrai Upazilas on the north, Durgapur and Natore sadar Upazilas on the south, Atrai and Natore Sadar Upazilas on the east, Mohanpur Upazila on the west. The climate of Puthia Upazila is characterized by hot, humid summers and generally mild winters and rainfall. In terms of temperature variation it appears that average annual temperature is about 26-38.7°C. Relative humidity percentage ranged from 77 % in April and about 88 % in July. The soil of Puthia Upazila is rich alluvium [3].

Methodology: The present work is the outcome of extensive survey in Puthia upazila of Rajshahi district, Bangladesh undertaken during January 2018 to December 2018 to collect information on the medicinal uses of different plant species. A total of 127 species belonging to 105 genera under 66 families were recorded. Medicinal information was obtained through semi-structured interviews with knowledgeable traditional healers. A total of 195 informants having an age range 20-76 years were interviewed using semi-structured interviewed method [4]. Plant

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parts with either flower or fruits collected using traditional herbarium techniques to make voucher specimens for documentation and voucher specimens have been preserved at Herbarium of Rajshahi University.

Identification: Collected specimens have been critically examined, studied and identified. Identifications have been confirmed by consulting standard literatures [5, 6] and Ahmed, *et al.* [7]. Nomenclature has been updated following recent literature [7-9].

Figure-1. Map of the study area

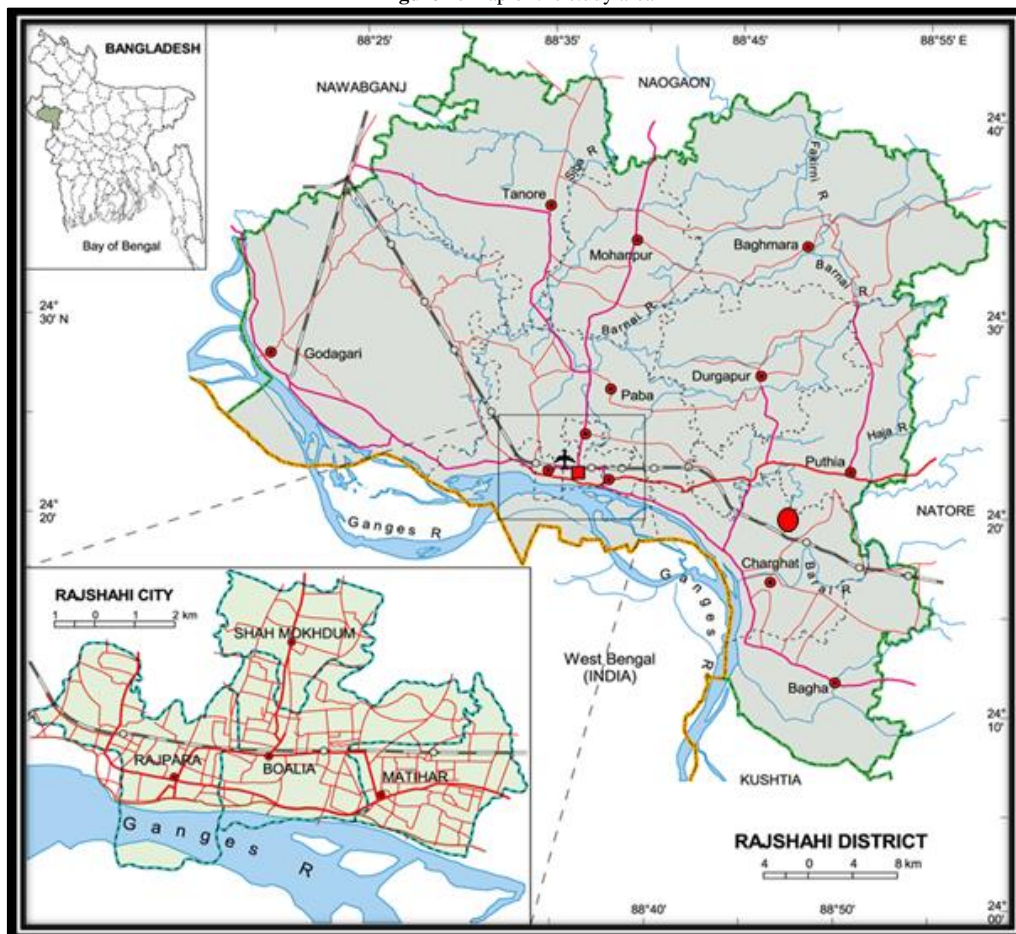


Figure-2. Interview with medical practitioners in the study area







Figure-3. Preparation of herbarium sheets in Plant Taxonomy Laboratory



Figure-4. Natural vegetation in the study area



3. Results and Discussion

Traditional knowledge and formulation of medicinal plants used by the medical practitioners in Puthia upazila of Rajshahi district, Bangladesh was carried out from January 2018 to December 2018. A total of 127 plant species under 105 genera and 66 families were recorded. Magnoliopsida (Dicotyledones) is represented by 54 families, 97genera and 96 species, whereas Liliopsida (Monocotyledones) by 12 families, 19 genera and 21 species. These comprise of 48 herbs, 36 trees, 21 shrubs, 9 climbers belong to 58 families. Distribution of angiosperm species in the families shows variation. The family Fabaceae 7 species and Euphorbiaceae represented by 6 species. Each of Moraceae and Apocynaceae is represented by 5 species. Each of Asteraceae 5 species and Amaranthaceae represented by 3 species. Each of Lamiaceae, Acanthaceae Zingiberaceae, Liliaceae, Piperaceae Malvaceae, Caesalpiaceae, Combretaceae, Rutaceae, Solanaceae and Verbenaceae is represented by 3 species. Each of Lauraceae, Cucurbitaceae, Mimosaceae, Myrtaceae, Anacardiaceae, Oxalidaceae, Apiaceae, Convolvulaceae, Araceae and Poaceae is represented by 2 species. A single species in each of recorded by 40 families (Table 1). Of 127 species recorded here, herbs are represented by 58 (45.66%), trees by 38 (29.92%), shrubs by 23 (18.11%) and

climber by 9 (7.08%) species (Figure 5). For each species scientific name, local name, family, habit, ailments, formulations and part (s) used are provided.

Use of plant parts as medicine shows variation. Leaves (46.45%) are the leading part used in a majority of medicinal plants followed by Bark (16.33%), fruits (19.68%), root (17.32%), seed (13.38%), stem (8.86%), whole plants (18.11%), flowers (3.14%), leaf stalk (0.78%), rhizome (2.36%), gum (3.14%), petiole (2.36%), tuber (2.36%), bulb (1.57%), latex (1.57%), bud (0.87%) (Figure 6). The survey has also recorded 96 categories of uses of 127 medicinal plants. Among them, 25 species were used to fever, 22 species for dysentery, 12 species for diarrhoea, 14 species for cough, 11 species for asthma, 11 species for diabetes, 11 species for skin diseases, 8 species for jaundice, 7 species for constipation, piles, stomach pain, hair treatment, headache and vomiting. 7 species for rheumatism, bites of insect, burning spot, acidity and ringworms, 5 species for bronchitis, weakness, blood pressure, gonorrhoea, toothache, liver disease and stop bleeding. 24 categories of ailments were treated by two to four species and other 39 categories of ailments were treated by only one species.

The result of this information showed that these local people of Puthia upazila of Rajshahi district still depend on medicinal uses of plants for the treatment of burning sensation, diabetes, bronchitis, weakness, insects and snake bite, high blood pressure, asthma, passing of semen, gonorrhoea, skin diseases, jaundice, headache, glandular swelling, diarrhoea, acidity, dry cough, cancer, dysentery, scabies, menstrual disorder, tumors, leucoderma, catarrhal fever, chronic fever, malarial fever, toothache, burning wounds, stomachic, stomachache, piles, fever, epilepsy, gout, rheumatism, traumatic injury, abortion, vomiting, bleeding gums, ulcer, anemia, ring worm, hiccup, pneumonia, gastritis, tuberculosis, arthritis, heart disease, abdominal pain, hypertension, paralysis, constipation, baldness, sore, dyspepsia, chicken pox, pain, pyorrhea, eczema, cholera, flatulence, scurvy, intoxication, indigestion, whooping cough, digestive system disorders, liver disorders, intestinal worms, worms, gastrointestinal disorders, edemas, alterative and attendant, wound and injury, menstruation, cold, lung infection, dysuria, edema, bleeding, heavy bleeding, kidney, eye inflammation, boils, mouth freshener, bruises, high cholesterol, dry skin, hepatitis, hair fall, cough and many types of diseases.

The most frequently used species for the treatment of different diseases are, *Amaranthus spinosus*, *Achyranthes aspera*, *Boerhaavia diffusa*, *Solanum nigrum*, *Euphorbia hirta*, *Phyllanthus ebbelica*, *Argemone mexicana*, *Ocimum sanctum*, *Leucas aspera*, *Leonurus sibiricus*, *Syzygium cumini*, *Aegle marmelos*, *Citrus aurantifolia*, *Feronia limona*, *Clerodendrum viscosum*, *Lantana camara*, *Vitex negundo*, *Ipomoea aquatica*, *Ipomoea batatas*, *Cuscuta reflexa*, *Nymphaea nouchali*, *Basella alba*, *Tinospora cordifolia*, *Calotropis procera*, *Acacia nilotica*, *Mimosa pudica*, *Rouwolfia serpentina*, *Catharanthus roseus*, *Nerium indicum*, *Carissa carandas*, *Alostonia scholaris*, *Hibiscus rosa-sinensis*, *Abelmoschus esculentus*, *Sida cordifolia*, *Coccinia grandis*, *Momordia charantia*, *Brassica napas*, *Azadirachta indica*, *Litchi chinensis*, *Carica papaya*, *Cinnamomum tamala*, *Litsea glutinosa*, *Cassia fistula*, *Saraca indica*, *Tamarindus indica*, *Cajanus cajan*, *Lablab purpureus*, *Erythrina variegata*, *Dalbergia sissoo*, *Butea monosperma*, *Clitoria ternatea*, *Albizia procera*, *Lowsonia inermis*, *Punica granatum*, *Averrhoa carambola*, *Oxalis corniculata*, *Terminalia arjuna*, *Terminalia belerica*, *Abroma augusta*, *Cissus quadrangularis*, *Heliotropium indicum*, *Poligonum hydropiper*, *Opuntia dillenii*, *Centella asiatica*, *Coriandrum sativum*, *Swertia chirata*, *Moringa oleifera*, *Kalanchoe pinnata*, *Bombax ceiba*, *Cuscuta reflexa*, *Nigella sativa*, *Chenopodium album*, *Mimosus elengi*, *Andrographis paniculata*, *Justicia gendarussa*, *Adhatoda vasica*, *Tridax procumbens*, *Wedelia chinensis*, *Tagetes erecta*, *Eclipta alba*, *Enhydra fuctuans*, *Glinum oppositifolium*, *Polyalthia longifolia*, *Artocarpus heterophyllus*, *Ficus hispida*, *Ficus racemosa*, *Ficus benghalensis*, *Ficus religiosa*, *Piper betel*, *Piper longum*, *Peperomia pellucida*, *Nyctanthes arbor-tristis*, *Diospyros malabarica*, *Cocos nucifera*, *Areca catechu*, *Phonex sylvestris*, *Commelina benghalensis*, *Alocasia indica*, *Colocasia esculenta*, *Pistia stratiotes*, *Cyperus rotundus*, *Cynodon dactylon*, *Saccharum officinarum*, *Oryza sativa*, *Zea mays*, *Ananas sativus*, *Musa sapientum*, *Curcuma longa*, *Zingiber officinale*, *Amomum subulatum*, *Allium cepa*, *Allium sativum*, *Aloe barbadensis*, *Aloe vera*, *Eichhornia crassipes* (Table 1). This finding of common medicinal plant families in the study is in agreement with Anisuzzaman, et al. [10], Ghani [11], Khan and Huq [12], Khan [13], Jesmin, et al. [14], Shahnaj, et al. [15], Choudhury and Rahmatullah [16], Faruque and Uddin [17] and Yusuf, et al. [18] Yusuf, et al. [19], Yusuf, et al. [20], Rahman, et al. [21]; Rahman, et al. [22]; Rahman [23]; Rahman and Akter [24]; Rahman and Gulshana [25]; Rahman and Lipi [26]; Rahman and Parvin [27].

Table-1. Investigated medicinal plants used by the Herbal Practitioners at Puthia Upazila of Rajshahi District, Bangladesh

Sl. No	Scientific name	Family	Local Name	Parts of Used	Diseases	Formulations
1.	<i>Argemone mexicana</i>	Papaveraceae	Sheyalkata	Root, Latex	(a) Skin cracks, (b) Jaundice, (c) Skin cracks, (d) Tumors, (e) Malarial fever.	(a) Root paste is used in skin disease. (b) Latex is used for jaundice. (c) Latex is used for skin cracks. (d) Latex is used for tumors, cancer. (e) One or two gm of root back is given with betel leaves twice a day for three days to cure malarial fever.
2.	<i>Artocarpus heterophyllus</i>	Moraceae	Kathal	Root, Leaf	(a) Diarrhea, (b) Scabies	(a) Decoction of roots is used internally in diarrhea. (b) Yong leaves paste used regularly on infected skin.
3.	<i>Amaranthus spinosus</i>	Amaranthaceae	Katanotey	Whole plant	(a) Toothache, (b) Dysentery,	(a) Decoction of the herb is used as a mouth-wash for toothache.

					(c) Burning wounds	(b) Leaves juice is used for dysentery. (c) Leaves paste is given to burning wounds.
4.	<i>Amaranthus viridis</i>	Amaranthaceae	Gaikhur, Shaknotey	Whole plant	(a) Acidity, (b) Leprosy, (c) Immunity	(a) Leaves are boiled with roots and smashed then taken. (b) The plant juice mixed with water taken orally to cure these diseases once daily 2-3 weeks. (c) Whole plant used for good health and immunity.
5.	<i>Achyranthes aspera</i>	Amaranthaceae	Dhanshissha	Stem, Leaf, Root	(a) Jaundice, (b) Tonsillitis, (c) Traumatic injury	(a) Leaves of <i>Cajanus cajan</i> and <i>Lawsonia inermis</i> are crushed with roots of <i>Achyranthes aspera</i> to obtain juice, which is taken orally with molasses prepared from sugarcane juice once daily for consecutive day. (b) The crushed leaf mixed with water and filtrate is taken for tonsillitis. (c) Grinding, decoction of root is taken orally to cure traumatic injury.
6.	<i>Abroma augusta</i>	Sterculiaceae	Ulotkambal	Petiol, Seed	(a) Weakness, (b) Stomach pain	(a) Petiole is kept in water during night in morning juice is taken with sugar. (b) Seed paste mixed with a glass of water and treated twice for a day.
7.	<i>Abelmoschus esculentus</i>	Malvaceae	Dherosh	Fruit	(a) Stomachic, (b) Female weakness, (c) Hair fall, (d) Constipation	(a) Fruits juice mixed with cold water and sugar is used for these diseases. (b) Young fruits use as a vegetable at lunch regularly for a month. (c) Paste of young fruits used on head regularly. (d) Young fruits use as a vegetable regularly.
8.	<i>Acacia nilotica</i>	Mimosaceae	Babla	Bark, Leaf, Bark	(a) Bronchitis, (b) Dysentery, (c) Leucoderma	(a) Bark extracts is taken orally to cure bronchitis. (b) Pods are prescribed in dysentery. (c) Decoction of leaves is used for Leucoderma.
9.	<i>Acalypha indica</i>	Euphorbiaceae	Muktajhuri	Leaf	(a) Ringworm, (b) Snake bite	(a) Leaf paste with lime juice prescribed for ringworm. Leaf juice is emetic for children. (b) Paste of fresh part applied on the affected area treating for snake bite.
10.	<i>Aegle marmelos</i>	Rutaceae	Bel	Fruit, Root	(a) Stomachache (b) Constipation (c) diarrhea (d) Heart disease	(a) Unripe wood apple is made pieces and used in stomachache. (b) Ripe wood apple is made juice and taken to cure constipation. (c) Root extracts 0.5 cup mixed with sugar 1 teaspoon and cow milk 3 teaspoon used against for diarrhea. (d) 4 gm fresh root mixed with a few of water then crushed them is used for heart diseases daily 2 times.
11.	<i>Azadirachta indica</i>	Meliaceae	Neem	Leaf	(a) Chicken pox, (b) jaundice, (c) pyorrhea, (d) skin disease	(a) Leave paste mixed in warm water while bathing used for chicken pox. (b) Juice of leaves is used in jaundice. (c) Decoction of leaves is used as a gargle which cures swollen gums pain and pyorrhea. (d) Leave paste mixed in warm water while bathing used for diseases.

12.	<i>Averrhoa carambola</i>	Oxalidaceae	Kamranga	Fruit, Leaf	(a) Piles (b) Fever, (c) Dysentery (d) Liver pain	(a) After slicing the star fruit it has to be boiled in open sunlight for 1 week and to make dry powder out of it. Then 1.5gm of that powder of star fruit has to be taken with one glass of water twice every day. (b) 2gm dry powder of star fruit leaves has to be taken with 1.2 cup of water every day morning and evening for ¾ days. (c) In an intense stage of these ailments 1 teaspoonful of extract or juice of ripens star fruit has to be taken to improve the situation. (d) 3-4 teaspoonful of ripen star fruit juice to be taken with water to improve this condition.
13.	<i>Alstonia scolaris</i>	Apocynaceae	Chatim	Bark, Gum, Root	(a) Ulcers (b) Cancer (c) Rheumatism (d) Gastric problem	(a) The milky juice of gum is taken orally to cure ulcers. (b) Root extracts is taken orally to cure cancer. (c) Dry bark, salt, and Piper nigrum crushed them with water and made a paste used for rheumatism. (d) Bark (50 mg) is mixed with sufficient salt and administered once daily for 5 days.
14.	<i>Andrographis paniculata</i>	Acanthaceae	Kalomegh	Leaf	(a) Headache, (b) diarrhea, (c) cholera, (d) fever (e) Lung infection, (f) Leprosy.	(a), (b), (c), (d) The juice of leaves against fever, headache, diarrhea, and cholera. (e) Leaves are boiled in water and the water taken for lung infections. (f) Leaf paste is applied externally or infected area until cured leprosy.
15.	<i>Adhatoda vasica</i>	Acanthaceae	Basak	Whole plant specially leaf.	(a) Cough, Fever, (b) Bleeding piles,	(a) Juice obtained from macerated leaves of <i>Adhatoda vasica</i> is taken to cure cough, fever. (b) The extract or juice of plant is used in bleeding piles.
16.	<i>Areca catechu</i>	Arecaceae	Supari	Seed, Root	(a) Teaniasis, (b) Dyspepsia, (c) Blood Dysentery, (d) Toothache, (e) Sore	(a) 4 gm fresh seeds of areca are crushed and have to boil in 3 cup of water until it comes to 1 cup then filtered it and half of the mixture has to be taken orally in early morning and other half of the evening for 3 days. (b) The juice of the fresh fruit 2-3 teaspoonfuls every day can be taken for the improvement. (c) 4 gm fresh seed are crushed and has to be boiled in 3 cup of water until it comes to 1 cup then filtered it and the decoction taken twice a day as a remedy against blood dysentery. (d) Equal amount of root powder and dry nut powder are to fry in the pots and make ash out of it. Then the ash may be used for brushing the teeth as a remedy against toothache. (e) Fruit has to be dried in open sunlight and to make dry powder out of it. Then the powder applied on the

						affected area.
17.	<i>Alocasia indica</i>	Araceae	Mankochu	Fruit, Petiole	(a) Snake bite, (b) Fever	(a) Paste of petiole used in affected area treated for snake bite. (b) Fried of fruit is taken to cure several fevers.
18.	<i>Ananas comosus</i>	Bromeliaceae	Anarosh	Flowe, Leaf, Fruit	(a) Fever, (b) Abortion	(a) Fruits are taken to cure several fevers. (b) Young flower extract is taken for the abortion.
19.	<i>Amomum subulatum</i>	Zingiberaceae	Alach	Seed, Fruit, pod	(a) Mouth freshener, (b) Nausea, motion sickness (c) Cough	(a) The most common use of <i>Amomum subulatum</i> is as a mouth freshener. The powder of the seeds is chewed to reduce foul breath. (b) The seed of the powder of <i>Amomum subulatum</i> is consumed in a dose of 2-3g to treat nausea, motion sickness. (c) The powder of the seed is given in a dose of 3-5g with honey to treat cough.
20.	<i>Allium cepa</i>	Liliaceae	Piaj	Bulb	(a) Common cold (b) Cough (c) Headache (d) Snakebite	(a) and (b) Warm bulb juice along with <i>Brassica napus</i> oil is taken by massage of the whole body to cure common cold, cough. (c) Warm blub juice along with <i>Briassica napus</i> oil is applied on head to cure headache. (d) Macerated bulb juice is applied on the affected area for snake bite.
21.	<i>Allium sativum</i>	Liliaceae	Rasun	Bulb	(a) Cough, Fever (b) Eczema scabies (c) Blood Pressure	(a) Extracting the juice or pulping the bulbs to a paste has been taken to relieve problem such as coughs and fever. (b) Extracting the juice or pulping the bulbs to a paste has been applied externally to prevent greying of hair and to improve skin conditions such as eczema and scabies (c) Garlic is taken with hot rice to treat high blood pressure.
22.	<i>Aloe barbadensis</i>	Liliaceae	Ghritokumari	Leaf	(a) Paralysis, (b) Viral Jaundice. (c) Body weakness, (d) Skin care, (e) Hair treatment.	(a) Extract prepared from boiled leaf is taken to treat paralysis. (b) Leaf juice taken orally 2 times for 3 days to treat viral jaundice. (c) Leaves juice mixed with sugar is used to remove body weakness. (d) Paste prepared from leaf is used for skin care. (e) Juice of leaves is used for hair fall solution and mode silky and shine.
23.	<i>Boerhaavia diffusa</i>	Nyctaginaceae	Punarnava	Root, leaf	(a) Diuretic, (b) Asthma, (c) Insomnia.	(a) The root paste mixed with water is orally applied as a diuretic twice daily, (b) Decoctions of the roots and leaves are taken in moderate doses to cure asthma. (c) Paste of tender leaf mixed with water regularly treated twice spoon a day.
24.	<i>Basella alba</i>	Basellaceae	Puishak	Leaf, Root	(a) Constipation, (b) toothache (c) Burning	(a) The juice of the leaves is used in constipation, particularly in children and pregnant women. (b) Root chewed for toothache. (c)

					sensation.	Leaves paste is used for burning sensation.
25.	<i>Bombax ceiba</i>	Bombacaceae	Shimul	Gum	(a) Burning sensation, (b) Male weakness, (c) Rheumatism.	(a) A gum paste is used for burning sensation of body. (b) Roots extracts mixed with boiled water are given for sexual weakness in males. (c) Grinding decoction of root bark is taken orally for rheumatism.
26.	<i>Brassia napus</i>	Brassicaceae	Sorisha	Seed	(a) Hair treatment, (b) Insomnia, (c) Skin crack, (d) Gout, (e) Cough and Neuralgic	(a) Seed oil is boiled slightly and externally used in hair. It makes hair strong and shine. (b) Seed oil used on head to for good sleep. (c) To avoid skin cracks seed oil applied on skin. (d) Plaster of mustard is used in gout. (e) Slightly warm oil is used for cough and neuralgic.
27.	<i>Butea monosperma</i>	Fabaceae	Palash	Flowe, Leaf, Seed	(a) Diarrhea, (b) Urinary Complaints, (c) Body toxin	(a) In diarrhea flower infusion is given. (b) Flower juice mined with milk is orally taken to cure urinary complaints. (c) Flower is used to remove body toxins.
28.	<i>Cinnamomum tamala</i>	Lauraceae	Tejpata	Leaf, Bark	(a) Diabetes (b) Bronchitis (c) Cold cough	(a) <i>Cinnamomum tamala</i> leaves Fed at 10 mg/Kg for 15 days results in significant reduction in blood glucose level. (b) Take 2 or 3drops of oil of cinnamon leaf dissolved in a glass of warm water sweetened with a teaspoon of honey three times a day. (c) Dry leafs beady is use to smocking for few times to cure cough caused cold.
29.	<i>Coccinia grandis</i>	Cucurbitaceae	Telakucha	Leaf	(a) Hypertension, (b) Fever and vomiting	(a) Leaf juice is taken in the morning for 7 days to normalize hypertension. (b) Crushed leaves juice mixed with water are used for fever and vomiting.
30.	<i>Cassia fistula</i>	Caesalpiniaceae	Badarlathi	Young Leaf, Fruit, Bark	(a) Ringworms (b) Gout (c) Constipation (d) Diabetes	(a) Juice of the young leaves is used to cure ringworms once daily 10-12 days in the morning. (b) Fruits pulp is considered good application for gout, taken daily in few days. (c) Leaves boil 40 minutes with water then after few minutes decoction mixed with a spoonful sugar and orally treated for 2 weeks. (d) Decoction of bark mixed with water regularly.
31.	<i>Cajanus cajan</i>	Fabaceae	Arhar	Leaf, Seed	(a) Piles (b) jaundice (c) pneumonia (d) Mother milk secretion	(a) Leaves are used in diseases of the mouth and piles; (b), (c) Juice of leaves is laxative; given in jaundice and pneumonia. (d) The seeds are stringent to the bowels. Decoction leaves and seeds taken to check mother milk secretion.
32.	<i>Clitoria ternetea</i>	Fabaceae	Oporajita	Root, Leaf	(a) Throat pain, (b) Swellings, Tuberculosis glands, (d) Headache	(a) Paste of leaves is externally applied to cure throat pain. (b) Paste of leaves is externally applied to cure swelling. (c) Decoction of root is taken orally to cure Tuberculosis glands. (d) Paste of leaves is externally used

						to relief from headache.
33.	<i>Cissus quadrangularis</i>	Vitaceae	Harjora	Whole plant.	(a) Scurvy and irregular menstruation (b) Asthma (c) Indigestion (d) Piles (e) Broken limbs	(a) Stem juice is used in scurvy and irregular menstruation. (b) Paste of stem is given in asthma stem boiling in limewater is a useful stomachic (c) Juice of leaves are mixed with water and orally used for indigestion. (d) Juice of leaves are orally used for recovery of piles. (e) Stems, Roots and leaves are used as a plaster over Broken limbs
34.	<i>Centella asiatica</i>	Apiaceae	Thankuni	Whole plant	(a) Loose motion (b) dysentery (c) stomach pain (d) Tuberculosis	(a), (b), (c) The paste of the plant is taken with boiled rice as a remedy for loose motion, dysentery and stomach pain due to indigestion. (d) Juice made from whole plant taken 4 tea spoonful's twice a daily for two days for the treatment of tuberculosis
35.	<i>Coriandrum sativum</i>	Apiaceae	Dhone	Seed, Whole Plant	(a) Asthma, (b) Sneezing, (c) Cold, (d) Fever	(a) 50 ml of plant extract is taken orally twice a week for 3 weeks to cure asthma. (b) Coriander seeds mixed with ginger, jeera, pepper and milk make juice, it taken orally twice a day to cure sneezing. (c), (d) Paste or juice of whole plant mixed with salt is used for cold, cough and fever 2-3 days.
36.	<i>Catharanthus roseus</i>	Apocynaceae	Nyantara	Whole plant	Child Leukemia	Whole plant is plucked and made juice which helps in leukemia.
37.	<i>Carissa carandus</i>	Apocynaceae	Karamcha	Fruit, Root, bark	(a) Diabetes, (b) Anthelmintic and wound healing	(a) Decoction of root bark is orally taken to control diabetes; Ripe fruit is used remedy for diabetes. (b) Decoction of root bark is orally taken to cure anthelmintic and wound healing.
38.	<i>Calotropis procera</i>	Asclepiadaceae	Akando	Leaf	(a) Arthritis, (b) Paralysis, (c) Rheumatism	(a) Leaves are warmed over a fire and applied topically over the painful area after massaging with mustard oil and a pinch of salt. (b) Leaf paste heated and applied paralysis part. (c) Plant mucus or gums mixed with <i>Brassica napus</i> oil used for rheumatism in every night.
39.	<i>Capsicum frutescens</i>	Solanaceae	Morich	Leaf, Fruit	(a) Night blindness, (b) Headache, (c) Blood dysentery, (d) Mouth disease	(a) Juice of leaves are used to cure night blindness (b) Leaves are used in headache on forehead. (c) Powder of dried fruit is made into paste with water and fried with hot rice is given in blood dysentery. (d) 5 gm of fruit paste is dissolved in 1 liter of water administered thrice daily for 5 days against mouth disease.
40.	<i>Cuscuta reflexa</i>	Cuscutaceae	Sarnolata	Stem, Leaf	(a) Constipation, (b) liver disorder, (c) Antioxidant	(a), (b) Decoction of stem is useful in constipation, flatulence, liver complaints and bilious affections. (c) Decoction of leaves juice used as antioxidant.
41.	<i>Citrus aurantifolia</i>	Rutaceae	Lebu	Fruit	(a) Catarrhal fever, (b)	(a) A glass of worm water with 2 teaspoonful of honey and juice of

					Increase digestive power and appetite, (c) Skin irritation and nausea, (d) Balance diet.	fruit is taken as a remedy of catarrhal fever. (b) Has to eat by making lemonade or may be taken with rice. (c) Fruits juice is taken orally to cure skin irritation and nausea. (d) Fruit juice mixed with water and taken it every morning in empty stomachache.
42.	<i>Clerodendrum viscosum</i>	Verbenaceae	Bhat	Leaf, Root	(a) Asthma, (b) tumors, (c) skin diseases (d) Hair disease.	(a), (b), (c) Leaves and roots are used in asthma, tumors and certain skin diseases. (d) Leaf paste is applied to scalp and kept for 2-3 hours twice per week.
43.	<i>Colocasia esculenta</i>	Araceae	Kochu	Leaf, Petiole	(a) Stop bleeding, (b) tumors, (c) cancer	(a) The pressed juice of the petioles is stypitic, stimulant and rubefacient; used in athlete's foot and to stop bleeding from cuts. (b), (c) Leaf juice is used in tumors, ulcerated polyp, cancer of nose and warts.
44.	<i>Cyperus rotundus</i>	Cyperaceae	Mutha	Tuber, Root	(a) Fever, (b) Diarrhea, (c) Wounds, Sores	(a) Fresh root are crushed and boiled in 5 cup of water reduced to 3 cup then filtered it and the decoction has to be taken twice per day. (b) About 5 gm of crushed root are soaked overnight in 3 cup of water and taken twice daily for 3-5 days. (c) Macerated root paste is used to cure wounds and sores.
45.	<i>Cynodon dactylon</i>	Poaceae	Durbaghas	Whole plant	Stop bleeding	Fresh juice of whole plant is demulcent, astringent and diuretic; used in fresh cuts and wounds to stop bleeding.
46.	<i>Curcuma longa</i>	Zingiberaceae	Holud	Rhizom, Flower	(a) Eczema, (b) cold fever, (c) Dysentery, (d) Gonorrhoea, (e) gastric problem	(a), (b) Externally rhizome is used in the treatment of scabies, itches, boils, abscess, eczema, pains; internally for cough, cold, fever, inflammations, biliousness, dyspepsia, affections of the liver and jaundice; especially for mothers after delivery and in disorders of blood. (c) Rhizome paste or powder mixed with hot rice, mustard oil and table salt is taken for 3-4 days to cure dysentery. (d) Flower paste is used in ringworm and other parasitic skin diseases and also in the gonorrhoea. (e) Fresh rhizome chewing with table salt.
47.	<i>Diospyros malabarica</i>	Ebenaceae	Gaab	Fruit, Leaf, Stem	(a) Dyspepsia, (b) Cough, (c) Trypanosomiasis	(a) About 15 mg fruit powder macerated with little amount of water to make a paste and then taken orally twice daily for 3-4 days. (b) Approx. 2 gm of leaves powder is boiled in 5 cup of water till it come to the 2 cup than half of the liquid is administered orally in early morning and other in the evening for 7 days. (c) Stem bark decoction (400 ml) is given every hour against trypanosomiasis.

48.	<i>Dalbergia sissoo</i>	Fabaceae	Sisso	Leaf, Bark	(a) Hemorrhage, (b) Gonorrhoea, (c) Dysentery	(a) Dried bark is used as a local astringent and haemostatic in various forms of hemorrhage. (b) Decoction of leaves is taken orally to acute stage of gonorrhoea. (c) Decoction of leaves mixed with water orally treated twice a day for 3 days.
49.	<i>Datura metel</i>	Solanaceae	Dhutra	Leaf	(a) Rheumatic pain, (b) earache, (c) asthma, (d) skin disease	(a) Leaves are used as a local application for rheumatic swellings of the joints. (b), (c) used externally for earache and smoked to relieve spasmodic asthma. (d) Leaf paste with neem leaf paste applied externally daily, twice for 1 week against skin diseases.
50.	<i>Enhydra fluctuans</i>	Asteraceae	Helencha	Whole plant	Fever	Plant is cooked with fish curry and taken to revive appetite after long weakness due to fever.
51.	<i>Erythrina variegata</i>	Fabaceae	Madar	Leaf, Root	(a) Joints pain, (b) Earache, (c) Toothache, (d) Nematod	(a) Paste of leaves are applied externally to relief pain of the joints. (b) Leaves juice is poured into the ear to relief earache. (c) Leaves juice is used to relief earache. (d) Extract of roots is taken once daily as much as patient can to control.
52.	<i>Euphorbia hirta</i>	Euphorbiaceae	Dudhia	Whole plant	(a) Dysentery, (b) Bronchitis, (c) Edemas	(a) Whole plant is used to make paste and taken 3 times a day to cure dysentery (b) Grinding decoction of whole plant is taken to cure bronchitis once daily for a week. (c) Grinding decoction of whole plant is taken to cure edemas once daily for 4-5 days
53.	<i>Eclipta alba</i>	Asteraceae	Kalokeshi	Whole plant	(a) Diarrhea, (b) Constipation, (c) Hair treatment.	(a) Leaves juice mixed with sugar or honey is fed to the infant twice a day for three days to cure diarrhea (b) Pounded leaves mixed with cold water are drunk to cure constipation. (c) Paste of leaves applied on hair, it makes hair more black and shine.
54.	<i>Ficus religiosa</i>	Moraceae	Pakur	Fruit	(a) Asthma, (b) Dry cough	(a) The dried fruit, pulverized and taken in water for fortnight removes asthma, (b) Fruits extracts or cooked vegetable are taken orally for dry cough.
55.	<i>Ficus benghalensis</i>	Moraceae	Bot	Latex, Root, Bud	(a) rheumatic pains, (b) lumbago, (c) Vomiting (d) Malaria	(a), (b) Applied externally to cracked or inflamed soles, to alleviate rheumatic pains and lumbago. (c) A tip of the hanging roots crushed and mixed with water is used for obstinate vomiting. (d) Grinding, decoction of young buds; taken orally for malaria.
56.	<i>Ficus hispida</i>	Moraceae	Khoksha dumur	Fruit	(a) Diabetes, (b) Jaundice	(a) Fruit juice mixed with water is prescribe for diabetes patients, (b) Decoction of fruits is used for Jaundice.
57.	<i>Ficus racemosa</i>	Moraceae	Jagdumur	Fruit	(a) Dry cough, (b) Asthma, (c) Diabetes	(a) Fruits extracts or cooked vegetable are taken orally for dry cough. (b) 2-3 fresh fruits are

						eaten with honey twice a day for one week to cure asthma. (c) Half a teaspoon of unripe dried fruits powder is given twice a day for two months to treat diabetes.
58.	<i>Feronia limonia</i>	Rutaceae	Kotbel	Stem, Leaf, Fruit	(a) Piles (b) Vomiting, (c) Heart disease, (d) digestion	(a) Stem bark paste is applied over piles for cure. (b) Leaves juice is orally taken to control vomiting. (c) Fruits juice is orally taken to help the heart disease and digestion.
59.	<i>Glinus oppositifolius</i>	Molluginaceae	Gima shak	Leaf	(a) Fever, (b) Pain, (c) Earache	(a) Fried leaves are eaten to cure several fevers. (b) Juice of leaves is orally taken to relief from body pain. (c) Warm herb moistened with castor oil is a good cure for earache.
60.	<i>Hibiscus rosa-sinensis</i>	Malvaceae	Joba	Flower	(a) Burning wound, (b) Irregular menstruations, (c) Cooling and astringent. (d) Hair treatment	(a) Flower paste is used for burning wound, (b) Paste of flower mixed with water orally treated twice daily for two weeks. (c) Crushed flowers buds mixed with water making them juice is taken orally for cooling and astringent. (d) Paste of flower used orally for hair treatment.
61.	<i>Heliotropium indicum</i>	Boraginaceae	Hatisur	Leaf	(a) Dog bite, (b) Insects bite	(a) 10 gm macerated leaves juice is used for mad dog bite. (b) 5 gm leaves juice mixed with 5 gm <i>Ricinus communis</i> oil are applied honey bee and poisonous insects bite area.
62.	<i>Ipomoea batatas</i>	Convolvulaceae	Mistialo	Tuber, Leaf	(a) Edema, (b) Dysentery (c) Skin disease,	(a) At least 10-12 leaves are paste and used in the affected area for at least 1 month. (b) Sweet potato grained with appropriate amount of water and 1 teaspoonful filtered extract of it has to be taken 15-20 minutes alternately to hibernate the disease. (c) Tuber juice or pate is used for skin disease at one week.
63.	<i>Ipomoea aquatica</i>	Convolvulaceae	Kolmi shak	Whole plant	(a) jaundice, (b) bronchitis (c) leprosy, (d) fever	(a), (b) Plant leaves paste are dried in the sun and then 1 tea spoonful powder mixed with cold water orally for jaundice and bronchitis (c), (d) Plants are anthelmintic and carminative; useful in, leprosy, fever, and liver complaints.
64.	<i>Jatropha curcus</i>	Euphorbiaceae	Jamalkota	Leaf, Seeds, Gums, Stems,	(a) Fever, (b) Worms, (c) Anti-cancer, (d) Antibiotics. (e) Constipation.	(a) For fever three leaves cut in three pieces are boiled with a smalsiton (<i>Citrus aurantifolia</i>) Poked full of holes and one soursop leaf (<i>Annona muricata</i>) cut in three pieces. (b) The seeds are roasted or preched and eaten like nuts to destroy all worms in the body. (c) Decoctions of leaves are used for anti-cancer. (d) Decoctions of stems are used as antibiotics. (e) Gum mixed with liquid food and orally treated.
65.	<i>Justicia gendarussa</i>	Acanthaceae	Bij tarop	Leaf	Headache	Leaf is covered with mustard oil then that leaf is put on the

						forehead.
66.	<i>Kalanchoe pinnata</i>	Crassulaceae	Pathorkuchi	Whole plant.	Bites of insect	Leaves are diuretic, antilithic and insecticidal; applied to wounds, boils and bites of insects.
67.	<i>Litsea glutinosa</i>	Lauraceae	Pepulte	Leaf, Bark	(a) Furunculosis, (b) diarrhea, dysentery	(a) The root bark and leaves are used for treating furunculosis (b) The bark also acts as a demulcent and mild astringent in the treatment of diarrhea and dysentery
68.	<i>Lablab purpureus</i>	Fabaceae	Shim	Leaf	(a) Skin disease (b) Burning sensation	(a) Leaves are made paste and applied on skin to cure skin disease. (b) Leaves paste is used for burning sensation, febrifuge and tonic once daily 2-7 days.
69.	<i>Lawsonia inermis</i>	Lythraceae	Mehedi	Leaf	(a) skin disease, (b) Hair treatment	(a) Leaf paste is a valuable external application in skin diseases. (b) Leaves paste is valuable external used in hair fall solution and makes hair silky and shine.
70.	<i>Litchi chinensis</i>	Sapindaceae	Litchu	Fruit	(a) heart, (b) brain, (c) liver.	(a), (b), (c) Fruits are tonic to the heart, brain and liver.
71.	<i>Lantana camara</i>	Verbenaceae	Chotra	Leaf	(a) Aches and pains, (b) Measles	(a) Grind the leaves with turmeric and salt and apply it twice a week to the wounds. (b) Leaves are used to treat of measles.
72.	<i>Leucas aspera</i>	Lamiaceae	Setodron	Leaf, Root	(a) Snake-bite, (b) Chronic rheumatism. (c) Stomach pain (d) Psoriasis and other skin disease.	(a) The snake-bitten patient is orally administered macerated leaves of <i>Leucas aspera</i> (wild) link. At the same time macerated roots of the plant are applied to the bitten area. (b) The leaves juice are also useful in chronic rheumatism.(c) Ten ml of leaf extract with little rock salt is given twice a day for stomach pain until cure (d) Leaves paste are orally used to care psoriasis and other skin disease.
73.	<i>Leonurus sibiricus</i>	Lamiaceae	Roktodron	Whole plant	(a) Menstrual disease, (b) Uterus contraction, (c) Febrifuge	(a) The dried plant is prescribed as a tonic, vulnerary and general remedy in puerperal and menstrual disease. (b) Dried plant is useful towards uterus contraction. (c) Decoction of root and leaves are taken orally for febrifuge.
74.	<i>Momordica charantia</i>	Cucurbitaceae	Korolla	Whole plant	(a) Fever, (b) Diabetes, (c) Diabetes, (d) Head pain, (e) Stomachic	(a) An alcoholic extract of the whole plant is used in stomachic against colic and fever. (b) Juice of the whole plant orally taken to treated diabetes. (c) The leaves juice is taken orally daily for diabetes. (d) Root paste is used in head pain. (e) Cooked fruits used as stomachic.
75.	<i>Moringa oliefera</i>	Moringaceae	Sajna	Leaf, Root, Fruits, Seed.	(a) Blood pressure, (b) Wormicidal, Abortion, (c) Fever, Abdomen pain (d)	(a) Whole leaves cooked and eaten in high blood pressure. (b) Root bark made a paste with water is used for homicidal and abortion. (c) Root extracts is taken orally once daily for 2-3 days against fever and abdomen

					Rheumatism, (e) Diabetes, (f) Cold-cough, (g) Anti-inflammatory.	pain. (d) Seed oil is given for rheumatism. (e) Leaves are dried on heat and if taken with rice regularly, help in controlling diabetes. (f) Extraction of leaves taken orally twice daily for 2-3 days against cold-cough. (g) Leaves extract used as anti-inflammatory.
76.	<i>Mimuspos elengi</i>	Sapotaceae	Bokul	Stem-bark	(a) Bleeding gums, swelling (b) Asthma	(a) A decoction of stem bark is popularly used as an antidote to bleeding gums and swelling of the mouth and tongue. (b) Flowers smell is used to cure asthma by smoking.
77.	<i>Mimosa pudica</i>	Mimosaceae	Lajjaboti	Root, Leaf	(a) Diarrhea (b) Piles (c) Snakebites (d) Muscular pain	(a) Paste prepared from root is taken for the treatment of diarrhea. (b) Extract prepared from root is taken twice a day for one month to treat piles. (c) Roots of the plant soaked in raw cow milk then the milk is taken in the morning for 2-3 days for snake bites. (d) Decoction of leaves mixed with water and used orally for muscular pain.
78.	<i>Mangifera indica</i>	Anacardiaceae	Amm	Gum, Leaf	(a)Fever,(b)toothache,(c)skin disease	(a), (b) Decoction of the leaves is given to cure fever, diarrhea and toothache. (c) Gums paste is used in skin diseases.
79.	<i>Musa sapientum</i>	Musaceae	Kola	Stem, Bark	(a) Stop bleeding, (b) Snake bite	(a) Stem juice is used as stop bleeding. (b) Bark juice is used snake bite
80.	<i>Nigella sativa</i>	Ranunculaceae	Kalijeeri	Seed	(a) High blood pressure (b) Asthma.	(a) Extract from black seed to cause a significant decrease in blood pressure. (b) To eat nigella sativa seed decreasing asthma.
81.	<i>Nymphaea nouchali</i>	Nymphaeaceae	Shapla	Rhizom, Leaf	(a) Dysentery, (b) Burning spot	(a) Dried rhizome powder mixed with water as used for dysentery. (b) Paste of leaves are used to remove burning spot.
82.	<i>Nerium indicum</i>	Apocynaceae	Korobi	Leaf, Root bark	(a) Ulcers, (b) Joints pain, (c) Insect bite, (d) Swellings	(a) Paste of root bark is externally used to cure ulcer on the penis. (b) Paste of root bark is externally used to cure joints pain. (c) Young leaves and water boiled them and then it is used against poisonous insect bite. (d) Decoction of leaves is used to reduce swellings.
83.	<i>Nyctanthes arbor-tristica</i>	Oleaceae	Sheuli	Bark, Leaf, Roots	(a) Chronic fever, (b) Round and thread-worms, (c) Rheumatic fever (d) Bronchitis	(a) Leaves juice mixed with honey is orally in chronic fever. (b) Root juice is taken orally to children for the expulsion of round and thread-worms. (c) Bark juice is used to cure rheumatic fever. (d) Decoction of leaves is given for bronchitis.
84.	<i>Opuntia dillenii</i>	Cactaceae	Fanimonsha	Whole plant	(a) Asthma (b) Whooping cough (c) Gonorrhoea (d) Tumors and leucoderma	(a) Decoction of leaves is taken orally to cure asthma. (b) Decoctions of leaves mixed with hot water taken orally twice a day for 3 days to cure whooping cough.

					(e) Constipation (f) Piles	(c) The ripe fruits, when eaten are useful in gonorrhoea. (d) The juice of the plant is heating, cures tumors and leucoderma. (e) Decoctions of leaves are taken orally for constipation. (f) Ripened fruits juice is boiled with little sugar, cooled and stored in a bottle. Two spoonful of this juice is given orally twice a day for 21 days to cure piles.
85.	<i>Oxalis corniculata</i>	Oxalidaceae	Amrul	Leaf	(a) Stomach pain (b) Scurvy	(a) Decoction of leaves mined with water is orally taken for the treatment of stomach pain (b) Leaves juice is taken orally to cure scurvy.
86.	<i>Ocimum sanctum</i>	Lamiaceae	Tulsi	Leaf	(a) Cough, (b) bronchitis, (c) cold, (d) gastric disorder, (e) Ringworm.	(a), (b), (c), (d) The leaves are demulcent, expectorant and antipyretic; juice is used for the treatment of coughs, colds, catarrh and bronchitis; useful in gastric disorder, earache, ringworm, leprosy and itches.
87.	<i>Polyalthia longifolia</i>	Annonaceae	Debbaru	Bark	Fever	The bark is used as a febrifuge in the treatment of fever.
88.	<i>Peperomia pellucida</i>	Piperaceae	Peperomia	Leaf	(a) Fever, (b) headache, (c) abdominal pain	(a), (b) The crushed leaves are used for headache and fever; (c) their juice is given in abdominal pains.
89.	<i>Piper betel</i>	Piperaceae	Pan	Leaf	(a) Phlegm (b) Louse killing (c) Cough	(a) Leaves serves as a natural expectorant and aids in easy removal of phlegm. (b), (c) Leaf juice helps in killing lice and in reducing cough.
90.	<i>Piper longum</i>	Piperaceae	Pipul	Leaf, Bark	(a) Weakness, lumbar, (b) Dyspepsia, (c) Asthma, (d) Rheumatism, (e) Fever.	(a) Bark extract mixed with water is used in the marinade for body weakness and lumbar muscle degeneration. (b) 250 mg (leaf) dust of this plant has to be taken with one glass of water for 1 week. (c) 250 mg leaves dust of this plant has to be mixed with one glass of water and to be orally administered after meal. (d) 250 mg leaves powder of this plant mixed with 1 teaspoonful of ginger extract has to be taken 2 times daily. (e) A habit showed be grown to take 250 gm leaves dust of this plant mixed with 5-10 drops of ghee for at least one month to maintain the medicinal efficiency level in the blood to get permanent effect.
91.	<i>Polygonum hydropiper</i>	Polygonaceae	Biskatali	Whole plant	(a) Liver disease, (b) wound (c) Epilepsy (e) Dysentery.	(a), (b) Juice of the plant is reported to be used in enlarged liver, wounds. (d) In combination with tonics and gum myrrh, it is said to have cured epilepsy. (e) Seed paste mixed with a glass of water and treated twice for a day.
92.	<i>Punica granatum</i>	Punicaceae	Dalim	Fruit, stem, Leaf,	(a) Dysentery, (b) Dry cough, (c) Stomach	(a) A decoction of the dried fruit rind is drunk for the relief of dysentery. (b) 5g of dry leaf

				Seed	pain, (d) Heart and throat pain.	powder twice a day for 3 days to cure dry cough. (c) Three to four young twigs are eaten with little salt twice a day for a week to cure chronic stomach pain. (d) The seeds juice are considered a tonic for the heart and throat.
93.	<i>Psidium guajava</i>	Myrtaceae	Peara	Leaf, Bark	(a) Diarrhea, (b) Mouth wash, (c) Dysentery	For diarrhoea boiled leaf decoction and stem bark is administered twice daily for a week. (b) A young leaf is used daily for mouth wash. (c) Root paste mixed with water is used to treat dysentery once daily for 5 days.
94.	<i>Phyllanthus reticulatus</i>	Euphorbiaceae	Chitki	Leaf, Root	(a) Diarrhea, (b) Malaria, (c) Epilepsy	(a) 0 g leaves are soaked into 3 cups of water for overnight and then the water is administered orally in early morning for 3-5 days. (b) 20 gm root is boiled with 4-5 cups of water till it comes to 1 cup and half of the liquid is administered orally in early morning and other half in the evening for 4-5 days. (c) 10 gm roots are crushed and soaked in a 1 liter of water for 10-12 hours and then the solution taken 4-5 days.
95.	<i>Phyllanthus emblica</i>	Euphorbiaceae	Amloki	Fruit, Bark, Leaf	(a) Diabetes (b) Stomach problem, (c) Skin diseases, (d) Scurvy	(a) Green fruits and cumbered dry fruits can be used for treatment of diabetes. (b) Fruit powder, bark juice is taken orally 3 times daily till cure against for stomach problem. (c) Fruits are used for many skin diseases, mouth-wash and toothache problem. (d) One green fruit administered twice a day for about 2-3 months.
96.	<i>Ricinus communis</i>	Euphorbiaceae	Bherena	Leaf, seed	(a) Jaundice (b) Dysentery (c) Constipation.	(a) About 10 ml leaf juice is given orally once a day for 3 days to cure jaundice. (b) Juice of tender leaves mined with sugar is orally taken to cure Dysentery. (c) Seed oil is used internally for the treatment of constipation.
97.	<i>Rauwolfia serpentina</i>	Apocynaceae	Sarpogandha	Root	(a) Blood pressure, (b) Dysentery	(a), (b) Root extracts are sedative, tonic and febrifuge. It is a valuable remedy in high blood pressure, dysentery.
98.	<i>Sida cordifolia</i>	Malvaceae	Berela	Whole plant	(a) Asthma, (b) Bleeding Piles, (c) Gonorrhoea, (d) Rheumatism.	(a) 10 g root juice smeared and boiled in 4-5 cup of water till it comes to 2 cup, filtered and the decoction is taken twice daily for 1 month. (b) 5-6 young leaves are crushed and applied on the affected area at least 15-20 days. (c) 2-3 seedlings are boiled in a 1 liter of water till it comes to 250 ml then the solution taken orally in early morning. (d) 2-3 saplings are finely crushed, mixed with little amount of mustered oil, boiled it and then the solution is taken orally for 4-5 days.

99.	<i>Saraca indica</i>	Caesalpiniaceae	Ashoke	Bark, Root	(a) Abortion (b) Anemia (c) Dysentery	(a) Powder of dried ashok bark, Kachnan (<i>Bauhinia variegata</i>) bark and Rahini bark are mixed in the proportion in in 1:1:1. One spoon powder mixed with one glass gruel of rice is taken orally. One glass of mixture is taken twice a day for 2-5 days. it causes spontaneous abortion (b) Bark extracts mixed with 1 teaspoon sugar and 1 glass of milk is taken orally for anemia. (c) 1 gm root extracts mixed with water used in the morning against dysentery.
100.	<i>Syzygium cumini</i>	Myrtaceae	Jam	Bark, Seed, Fruit	(a) Asthma (b) Diabetes	(a) Grinding decoction of bark taken orally to cure asthma once daily for a week. (b) Seed paste is taken with sugar or a pinch of salt, fruits extracts taken daily against diabetes.
101.	<i>Spondias pinnata</i>	Anacardiaceae	Amra	Bark, Root	(a) Dysentery, Diarrhea and vomiting, (b) Gonorrhoea, (c) Irregular menstruation	(a) Infusion of the bark is given in dysentery, diarrhea and to prevent vomiting. (b) Decoction of the bark is given in gonorrhoea. (c) Roots are use in regulating menstruation.
102.	<i>Swertia chirata</i>	Gentianaceae	Chirata	Whole plant	(a) Fever, (b) Hiccups and vomiting	(a) The chirayata is an effective remedy for reducing fever. It is beneficial in for relieving high malarial fever as well. (b) The root of the plant is used with honey to relieve hiccups and vomiting.
103.	<i>Solanum nigrum</i>	Solanaceae	Tutbegun	Leaf, Fruit	(a) Dropsy (b) Ringworm	(a) Decoction and also aqueous extract of the leaves is very useful in dropsy for its diuretic action. (b) paste of the green fruit is applied to ringworm
104.	<i>Saccharum officinarum</i>	Poaceae	Aakh	Stem	(a) Jaundice	(a) A cup of sugar juice is given twice a day for three days to cure jaundice.
105.	<i>Tinospora cordifolia</i>	Menispermaceae	Guloncho	Stem, Leaf Stalk	(a) Passing of semen, (b) Diabetes, (c) Jaundice (d) pain and edema.	(a) Juice obtained from fresh stems of the plant is mixed with cold water or boiled with cow milk taken orally those times a day. (b) Leaf stalk powder mixed with neem paste is taken orally for diabetes.(c) About ten ml of leaf juice is given twice a day for five days to treat Jaundice.(d) The plant oil is effective in reducing pain and edema.
106.	<i>Terminalia arjuna</i>	Combretaceae	Arjun	Bark	(a) Blood pressure, (b) Heart disease	(a) Stem bark extracts mixed with cold water is taken orally daily in the morning on an empty stomach used for high blood pressure, (b) Stem bark extracts mixed with cold water is taken orally daily in the morning on an empty stomach used for prevention of heart disease.
107.	<i>Terminatia chebula</i>	Combretaceae	Haritaki	Seed, Fruit	(a) Vomiting, (b) Dysentery	(a) Powdered seeds mixed with honey are used in curing vomiting. (b) About ten gm of

						fruit powder is taken with hot water daily 2 times for dysentery until cure.
108.	<i>Terminalia belerica</i>	Combretaceae	Bahera	Green fruit	Cough	Decoction of green fruit taken orally to cure cough.
109.	<i>Tridax procumbens</i>	Asteraceae	Tridhara	Leaf	(a) Dysentery, (b) Diarrhea, (c) Bronchitis, (d) Bleeding	(a), (b) Leaf juice is used for the treatment of diarrhea and dysentery. (c) Crushed leaf juice mixed with 1 cup of water is taken orally for bronchitis. (d) The crushed leaves are applied arrest bleeding in bruises and cuts.
110.	<i>Tagetes erecta</i>	Asteraceae	Gendaphul	Whole plant	(a) Bleeding, (b) Blotch (c) Tuberculosis (d) Dysentery	(a) Pounded leaves are applied over fresh cuts to stop bleeding. (b) Leaves are smashed and the paste is applied on the blotch after slight warming to make it lighter to burst out and reduces the pain.(c) About 250 mg leaves powder mixed with little amount of goat-milk and have to be taken in the morning and evening per day for 1 month. (d) Approx. 2 teaspoonful's leaves juice mixed with 2 teaspoonful's of sugar and has to be taken 2-3 times per day for 2-3 days.
111.	<i>Tamarindus indica</i>	Fabaceae	Tetul	Fruit, Seed, Leaf,	(A) Fever, Gastritis, (B) Dyspepsia, (C) Blood Dysentery, (D) Mouth Disease.	(a) Pulp of the ripe fruit is a household remedy for fever and gastritis taken daily 1-7 days. 200 gm dry seed powder is boiled with 3 cups of water till to reduce 2 cups and then taken orally twice daily for 7-9 days. (c) 100 gm leaves are boiled in a 1 liter of water till it comes to ½ liter then the solution is taken 2 times per day for 5-6 days. (d) Boiled decoction of stem and bark is administered thrice for 5 days to prevent mouth disease.
112.	<i>Vitex negundo</i>	Verbenaceae	Nishinda	Leaf	(a) Headache, (b) Scrofulous sores, (c) Catarrhal fever.	(a) Prepare tonic from leaves is used for headache, (b) Leaf juice mixed with oil is applied to sinuses and scrofulous sores.(c) A decoction of the leaves along with long pepper is given in catarrhal fever.
113.	<i>Wedelia chinensis</i>	Asteraceae	Mohavringar aj	Leaf	(a) Alopecia, (b) hair disease, (c) Stop vomiting	(a), (b) The leaves are alterative and hair tonic; used for promoting hair growth; useful in cough, cephalalgia, skin diseases, especially alopecia. (c) The leaf juice with salt is given to stop vomiting.
114.	<i>Zingiber officinale</i>	Zingiberaceae	Ada	Rhizome	(a) Indigestion (b) Cold-cough (c) Cattarrhal fever, (d) Gout.	(a) Two gm of plant rhizome powder is taken with hot water daily 2 times for indigestion until cured. (b) 20 ml of juice prepared from corm, betel leaves is given daily for one week to cure cough and cold. (c) A mixture of ginger juice, leaf juice of <i>Ocimum</i>

						<i>sanctum</i> and honey is taken orally to infantile cough and catarrhal fever. (d) For gout, warm paste of rhizome and cotton seed is applied as a poultice for relief.
115.	<i>Chenopodium album</i> L.	Chenopodiaceae	Bethusage, batuashak	Leaves, Flowers	Hepatic disorders, Stomach trouble, Children weakness Ulcers.	Crushed leaves are anthelmintic; given in hepatic disorders. Leaves infusion is used for curing intestinal ulcers. Decoction of flowers and buds are also used in stomach trouble and weakness in children.
116.	<i>Carica papaya</i> L.	Caricaceae	Pepe	Fruits	Abortion, Stomachic.	Fruits pulp with bellam is used for these diseases.
117.	<i>Albizia procera</i> (Roxb.) Benth.	Mimosaceae	Koroi	Bark	Threadworms	Bark-boiled water with table salt is prescribed to expel threadworms. Bank extracts are also used for cooling or protect the human body under the sunshade.
118.	<i>Cocos nucifera</i> L.	Arecaceae	Narikel	Fruit, Oil	Burning sensation, Diarrhoea, Dysentery	Coconut oil is used for burning sensation of body. Water of unripe fruit is largely used as cooling in diarrhoea and dysentery.
119.	<i>Pistia stratiotes</i> L.	Araceae	Topapana	Whole plant	Urinary tract diseases, Ringworm, Burns, Wounds.	Decoction of the leaves in diuretic and prescribed in diseases of the urinary tract. The ashes of the plant are applied externally to ringworm on the scalp. Macerated roots juice is used for cooling burning body and good for wounds.
120.	<i>Commelina benghalensis</i> L.	Commelinaceae	Kanshira	Whole plant	Snake bite, Psoriasis, Chronic skin Eruption, Leprosy.	Pound Fresh part applied on the affected area, treating for snake bite. Crushed leaves juice is applied in psoriasis and other chronic skin eruption. Grinding, decoction of whole plant and made a juice taken orally to cure leprosy.
121.	<i>Oryza sativa</i> L.	Poaceae	Dhan	Grain	Strychnos poison, Febrile diseases	The roasted grain mixed with an equal amount of palm sugar is prescribed strychnos poisoning. Rice water is drink in febrile diseases.
122.	<i>Phoenix sylvestris</i> (L.) Roxb.	Arecaceae	Khajur	Central Tender part, Leaves	Gonorrhea, Threadworms,	Decoction of central tender part is used to cure gonorrhea. Crashed fresh leaves are soaked in water overnight, then water is taken next morning in empty stomach expel threadworms.
123.	<i>Zea mays</i> L.	Poaceae	Vutta	Corn	Diuretic	Lequid extract of the corn is used in diuretic.
124.	<i>Zizyphus mauritiana</i> Lamk.	Rhamnaceae	Chinese apple	Fruits,Le aves	Indigestion,Dia rrhea,Cough..	Young fruits are used for cough and digestion.. Grinding decoction of fruits taken orally to cure infantile diarrhea once daily 2-3 days.
125.	<i>Canna indica</i> L.	Cannaceae	Kolaboti	Rhizome, Root	Ringworm,Dro psy.	Macerated Rhizome paste is used in ringworm.Grinding,decoction of root juice mixed with water is taken orally to cure fever and dropsy.
126.	<i>Piper nigrum</i>	Piperaceae	Golmarich	Dry fruits	a) Cough, b)	a) Decoction of the dried fruits is

	L.				Gastric trouble	used in cough and cold. b) Fruits powder mixed with water taken orally after meal in the morning for gastric trouble.
127.	Eichhornia crassipes (Mart.) Sol.-Lau	Pontederiaceae	Kochuripana	Whole plant	Asthma, Goiter	Paste of tottri and dorear fena mixed with sap of posari taken half cupful twice a day until cured from asthma. For the treatment of goiter the plant juice is given orally and poultice of the plant pulp externally for three months.

Figure-5. Recorded plant habit in the study area

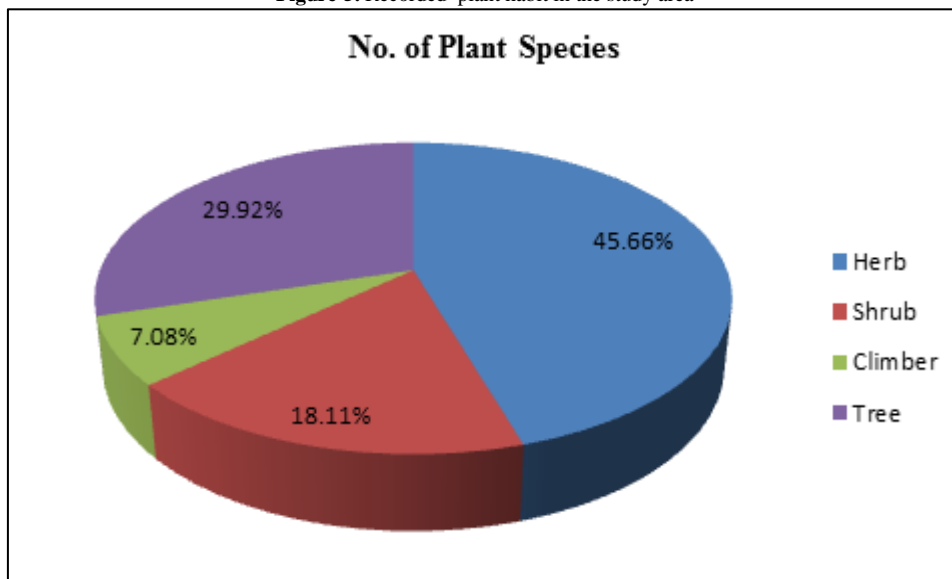
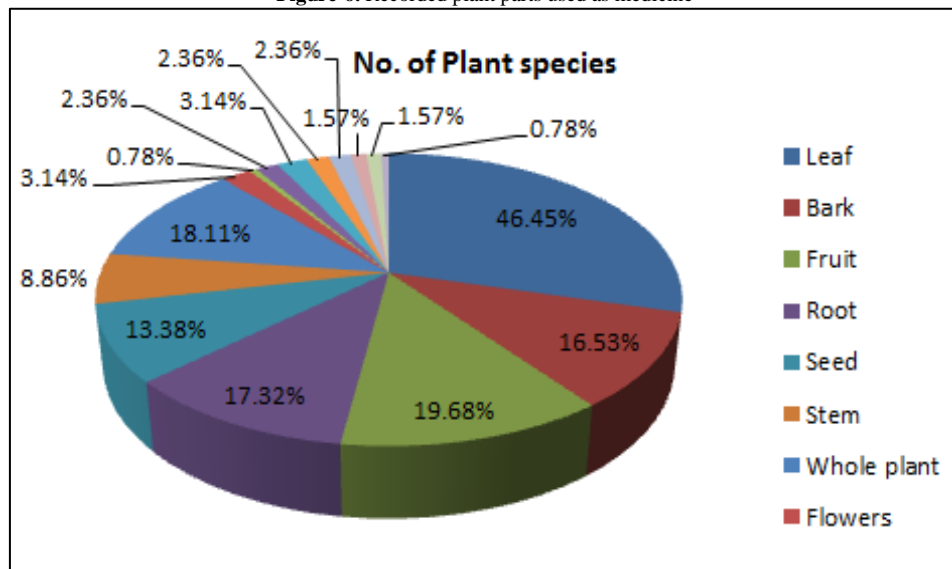


Figure-6. Recorded plant parts used as medicine



4. Conclusion

The rural communities are very much prone to these ailments because of one of the prominent reasons as virtually non existing health care installations. This forced the rural people of the study area to adopt their own traditional herbal medicine for their healthcare. Rural community’s practitioners and older people of Rajshahi District utilize a number of plant species grown around their homes for several medicinal uses. However, the younger generation by ignoring their ancestral traditional medicine is inclining towards the allopathic medicine. Since, several bioactive compounds are being extracted from traditional medicinal plants; they are in great demand in pharmaceutical industries. The photochemical an analysis and pharmacological investigations of traditional medicinally important plants by taking in view their proper conservation too, would help in developing novel drugs to treat ailments.

Acknowledgment

The authors are grateful to the local people in Puthia Upazila of Rajshahi District, Bangladesh for their co-operation and help during the research work.

Funding

This study has not received any external funding.

Conflict of Interest

The authors declare no conflicts of interests any matter related to this paper.

Data and Materials Availability

All related data have been presented in this paper.

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