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Medicinal plants used by the local people at the village Pania under Baghmara Upazila of Rajshahi District, Bangladesh

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ABSTRACT

Medicinal plants used by the local people at the village Pania under Baghmara upazila of Rajshahi district, Bangladesh was carried out from December 2016 to November 2017. A total of 56 species belonging to 52 genera under 39 families were recorded.

Magnoliopsida is represented by 33 family, 46 genera and 49 species and Liliopsida is represented by 6 family 6 genera and 7 species. For each species botanical name, local name, habit, parts used, ailments, treatment process and family were provided. It has been documented and this might be scientifically authorized for their therapeutic properties. Local people of the area depend on knowledge of "Kabiraj" (locally healer's common name) for simple ailments and also people depend on local primary healthcare centre for major health problems. Therefore, it would be important to document the traditional knowledge of medicinal plants for further healing purpose and the medicinal plants are used as traditional health care system need urgent conservation.

Keywords: Medicinal plants, Herbal medicine, Baghmara, Rajshahi, Bangladesh

1. INTRODUCTION

Medicinal plant is an important wealth in our country. From long ago medicinal plant assail their leaf, stem, root; fruit etc are used to protect desire. But with the much destructing of forest they are also destroyed. According to the scientist many of them are already extinct. So the topic is very important in this time. According to World Health Organization (WHO) consultative body of medicinal plants has formulated a definition of medicinal plants in the following way "A medicinal plant is any plant which in one or more of its organs, contains substances that can be used for therapeutic purposes or which is a precursor for synthesis of useful drugs" (Sofowora, 1982). Plants and man are inseparable. Plants existed on the earth in the geological past form the early history of the earth. The use of plants to alleviate human suffering is as old as the evolution of human civilization itself. From the early stages of human civilization, plants, especially medicinal plants have played a pioneering role for the welfare of human beings. Recently, dramatic changes have taken place in the primary health care system of world population through the development of science, technology and medical science, but till to day 400 Crore of people of the world are totally dependent on herbal medicine. It is revealed that even in the developed countries 25%, of the prescribed drugs come from plant sources and herbal medicines are used by about 75-80% of the world's population for primary health care because of their better cultural acceptability, better compatibility with human body and lesser side effects. WHO depicts that over 80% of world's population depends on biological resources for their primary healthcare demands (WHO, 1999).

Bangladesh has very rich in Bio-diversity. It has more than 500 medicinal plants species (Yusuf *et al.,* 2006). The total numbers of plants with medicinal properties in the subcontinent are present stands at about 2000 species. About 450 to 500 species of such medicinal plants so far been enlisted as growing or available in Bangladesh (Ghani, 2003).

Ethno-medicinal works in Bangladesh: Studies on ethno-botanical and medicinal information of local and ethnic communities in Bangladesh is at initial stage. Several ethno-medicinal studies in Bangladesh have been carried out by Alam (1992), Alam *et al.* (1996), Chakma *et al.* (2003), Choudhury and Rahmatullah (2012), Faruque and Uddin (2014), Khisha (1996), Rahman *et al.* (2008a, 2008b, 2010, 2012, 2013a, 2013b, 2013c, 2013d, 2014a, 2014b, 2014c, 2015), Rahman and Akter (2013), Rahman and Khanom (2013), Rahman (2013a, 2013b, 2013c, 2014d, 2013e, 2013f, 2013g, 2013h, 2013i, 2013j, 2013k, 2014a, 2014b, 2015a, 2015b, 2015c), Rahman and Gulshana (2014), Rahman and Parvin (2014), Rahman and Rahman (2014), Rahman and Rojonigondha (2014), Rahman and Kumar (2015), Rahman and Keya (2015), Rahman and Debnath (2015) and Uddin *et al.* (2001, 2004, 2006, 2008, 2012, 2014). In this present research project was too reported about local traditional uses of medicinal plants collected from traditional practitioners to cure human diseases at the village Paina under Baghmara upazila of Rajshahi district, Bangladesh.

2. MATERIALS AND METHODS

Study area: Bagmara is an Upazila of Rajshahi District in the Division of Rajshahi, Bangladesh. Bagmara is located at 24.5639°N 88.8083°E . It has 57675 households and total area 363.3 km^2. It is bounded by Manda and Atrai Upazilas on the North, Durgapur, Puthia and Natore Sadar Upazilas on the South, Atrai and Natore Sadar Upazilas on the East, Mohanpur upazila on the West. The climate of Baghmara upazila is characterized by hot, humid summers and generally mild winters and rainfall. The summer season commences from April and continues up to the end of June. The rainy season comes at end of June and stays up to September. The winter season starts from the middle of November and last up to the end of February. In terms of temperature variation it appears that average annual temperature is about 26-36^{o}C. Relative humidity percentage ranged from 77% in April and about 88% July. The rainfall is heavy during July to September. The maximum amount of monthly rainfall being 509mm in August 2014 and minimum amount of monthly rainfall being 0 mm in Nov-Dec 2014, January and April 2015. The soil is Baghmara upazila is rich alluvium. The

texture of the soil is clayey. The soil pH of the area varies from 5.5 to 6.0 and 6.7 to 6.9 respectively with an average value of 7.22. This is the best soil for the growth of various plants and suitable for agriculture and gardening (BPC, 2001).

Survey method: Medicinal plants used by the local people at the village Pania under Baghmara upazila of Rajshahi District, Bangladesh was carried out from December 2016 to November 2017. A total of 56 species belonging to 52 genera under 39 families were recorded. A survey on the determination of the location of different species was made and a list was prepared to be acquainted with the plants available in the selected area. All the species were noted and time to time the areas were visited to see when they flowered. For the morphological study, different types of species were examined again and again in order to see if there was any variation or not. They were collected at flowering stages and herbarium specimens were prepared as vouchers. In this practice standard method was followed (Alexiades, 1996). Medicinal information was also recorded. A total of 46 informants having an age range 17-62 years were interviewed using semi-structured interviewed method. Among them 17 were female and rest 29 were male. Regular field studies were made in the study area during the period. The information about the plants used for various diseases was gathered through interviews and discussion with the elderly people, medicine men and traditional medical practitioners were consulted.

Plant Identification: The major collected materials were identified and described up to species with the help of Hooker (1961), Prain (1963), Kirtikar and Basu (1987), and Ahmed *et al*. (2007-2009) were consulted. For the current name and up-to-date nomenclature Pasha and Uddin (2013) and Huq (1986) were also consulted. All the collected plant specimens were kept in the Herbarium, Department of Botany, and University of Rajshahi, Bangladesh.

3. RESULTS AND DISCUSSION

In the present survey, a total of 56 plant species belonging to 52 genera and 38 families were recorded (Table 1). Out of these plants species 48.2% belonged to herbs, 25% tree, 17.85% Shrub, 8.92% Climber (Figure 1). Use of plant parts as medicine shows variation. Leaves (44.64%) are the leading used in a majority medicinal plants followed by petiole 3.57%, flower 3.57%, rhizome 1.78%, bulb 3.57%, fruit 10.71%, root 10.71%, stem 5.35%, whole plant 17.85%, gum 3.57%, latex 1.78%, bark 7.14, seed 1.78% (Figure 2). For each species scientific name, local name, family, habit, ailments, treatment process and part(s) used are provided. The most frequently used species for the treatment of different diseases are *Piper betel, Achyranthes aspera, Lablab purpureus, Psidium guajava, Aegle marmelos, Citrus aurantifolia, Solanum nigrum, Justicia gendarussa, Allium cepa, Allium sativum, Aloe vera, Abroma augusta, Acacia nilotica, Amaranthus spinosus, Amaranthus viridus, Andrograhis paniculata, Artocarpus heterophyllus, Ocimum sanctum, Azadirachta indica, Basella alba, Bombax ceiba, Boerhaavia diffusa, Coccinia grandis, Colocasia esculenta, Curcuma longa, Cynodon dactylon, Clerodendrum viscosum, Cuscuta reflexa, Enhydra fluctuans, Kalanchoe pinnata, Lawsonia inermis, Polygonum hydropier, Rauvolfia serpentina, Terminalia arjuna, Wedelia chinensis* and *Vitex negundo*. Distribution of medicinal plant species in the families shows variation. Moraceae is represented by 4 species. Amaranthaceae, Asteraceae, Piperaceae is represented by 3 species and Fabaceae, Myrtaceae, Euphorbiaceae, Rutaceae, Apocynaceae, Solanaceae, Verbenaceae, Acanthaceae, Liliaceae is represented by 2 species. Each of Annonaceae, Nyctaginaceae, Basellaceae, Polygonaceae, Sterculiaceae, Bombaceae, Malvaceae, Cucurbitaceae, Mimosaceae, Lythraceae, Combretaceae, Sapindaceae, Anacardiaceae, Meliaceae, Apiaceae, Asclepiadaceae, Convolvulaceae, Cuscutaceae, Boraginaceae, Lamiaceae, Araceae, Poaceae, Musaceae, Zingiberaceae, Aloeceae is represented by 1 species. The survey indicated that the common medicinal plant families in the study area are Acanthaceae, Anacardiaceae, Annonaceae, Aloeaceae, Amaranthaceae, Apocynaceae, Araceae, Asteraceae, Apiaceae, Basellaceae, Cucurbitaceae, Combretaceae, Cuscutaceae, Crassulaceae, Euphorbiaceae, Lamiaceae, Liliaceae, Lythraceae, Musaceae, Myrtaceae, Meliaceae, Malvaceae, Moraceae, Poaceae, Piperaceae, Sapindaceae, Sterculiaceae, Verbenaceae and Zingiberaceae. This findings of common medicinal plant families in the study is in agreement with Anisuzzaman *et al.* (2007); Ghani (2003); Khan and Huq (1975), Khan (1998), Kona and Rahman (2016), Jamila and Rahman (2016a, 2016b), Jamila *et al.* (2016), Nahar *et al.* (2016), Islam and Rahman (2016) and Yusuf *et al.* (1994, 2006, 2009).

Documentation of traditional medicinal knowledge could be beneficial activity for human mankind health purpose. The local healers have incredible knowledge of medicinal properties and uses of their ambient natural resources. The study showed that the traditional uses of medicinal plants which might be used as positive indicator for the effectiveness of the reported medicinal plants in treating many human diseases. However, the further efforts should be made to start in-depth to understand the medicinal uses for pharmaceutical research which will bring for new treatment and develop primary health care centre of local folks.

Table 1 Medicinal plant used by the local people at the village Pania under Baghmara upazila of Rajshahi district, Bangladesh.

Sl. No	Botanical Name & Family Name	Local Name	Habit	Parts Used	Ailments	Treatment process
1	*Allium cepa* L. Family: Liliaceae	Piaj	Herb	Bulb	(a) Cold, (b) Cough	(a), (b) Warm bulb juice along with *Brassica napus* oil is taken by massage of the whole body to cure common cold, cough.
2	*Allium sativum* L. Family: Liliaceae	Rasun	Herb	Bulb	(a) Cough, Fever (b) Eczema, scabies	(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 graying of hair and to improve skin conditions such as eczema and scabies
3	*Aegle marmelos* (L.) Corr. Family: Rutaceae	Bel	Tree	Fruit, Root	(a) Stomachache (b) Constipation (c) diarrhea	(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.
4	*Achyranthes aspera* L. Family: Amaranthaceae	Dhan shissha	Herb	Stem	Jaundice	Leaves of *Cajanus cajan* and *Lawsonia inermis* are crushed with roots of *Achyranthes aspera* to obtain juice, which is taken orally with molasses prepared from sugarcane juice once daily for consecutive day.
5	*Citrus aurantifolia* (Christ.) Sw. Family: Rutaceae	Lebu	Shrub	Fruit	(a) catarrhal fever (b) Increase digestive power and appetite	(a) A glass of worm water with 2 teaspoonful of honey and juice of fruit is taken as a remedy of catarrhal fever. (b) Has to eat by making lemonade or may be taken with rice.
6	*Euphorbia hirta* L. Family: Euphorbiaceae	Dudhia	Herb	Whole plant	(a) Dysentry (b) Bronchitis	(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.
7	*Aloe vera* Tourn. ex L. Family: Aloeaceae	Ghritokumari	Herb	Leaf	(a) Paralysis, (b) Viral Jaundace.	(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.
8	*Curcuma longa L.* Family: Zingiberaceae	Holud	Herb	Rhizome, Flower	(a) Eczema, (b) eye disease, (c) cold fever, (d) Dysentery, (e)	(a), (b), (c) Externally rhizome is used in the treatment of scabies, itches, boils, abscess, eczema, eye diseases, pains,; internally for cough, cold,

					Gonorrhea	fever, inflammations, biliousness, dyspepsia, affections of the liver and jaundice; especially for mothers after delivery and in disorders of blood. (d) Rhizome paste or powder mixed with hot rice, mustard oil and table salt is taken for 3-4 days to cure dysentery. (e) Flower paste is used in ringworm and other parasitic skin diseases and also in the gonorrhea.
9	*Musa sapientum L.* Family: Musaceae	Kola	Herb	Stem	Stop bleeding	Stem juice is used as stop bleeding.
10	*Cynodon dactylon Pers.* Family: Poaceae	Durbaghas	Herb	Whole plant	Stop bleeding	Fresh juice of whole plant is demulcent, astringent and diuretic; used in fresh cuts and wounds to stop bleeding.
11.	*Colocasia esculenta (L.) Schott.* Family: Araceae	Kochu	Herb	Leaf, Petioles	(a) Stop bleeding, (b) tumors, (c) cancer	(a) The pressed juice of the petioles is styptic, stimulant and rubefacient; used in athlet's foot and to stop bleeding from cuts. (b), (c) Leaf juice is used in tumors, ulcerated polyp, cancer of nose and warts.
12.	*Wedelia chinensis (Osbeck) Merr.* Family: Asteraceae	Mohavringaraj	Herb	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.
13.	*Tridax procumbens L.* Family: Asteraceae	Tridhara	Herb	Leaf	(a) Dysentery, (b) diarrhea	(a), (b) Leaf juice is used for the treatment of diarrhea and dysentery.
14.	*Vitex negundo L.* Verbenaceae	Nishinda	Herb	Leaf	Headache	Prepare tonic from leaves is used for headache.
15.	*Andrographis paniculata (Burm f.) Wall ex Nees.* Family: Acanthaceae	Kalomegh	Herb	Leaf	(a) Headache, (b) diarrhea, (c) cholera, (d) fever.	(a),(b),(c),(d) The juice of leaves against fever, headache, diarrhea, and cholera.
16.	*Ocimum sanctum L.* Family: Lamiaceae	Tulsi	Herb	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.
17.	*Clerodendrum viscosum Vent.* Family: Verbenaceae	Bhat	Shrub	Leaf, root	(a) Asthma, (b) tumors, (c) skin diseases.	(a), (b), (c) Leaves and roots are used in asthma, tumours and certain skin diseases.
18.	*Heliotropium indicum L.* Family: Boraginaceae	Hatisur	Herb	Leaf	(a) Ringworm, (b) eye disease, (c) fever.	(a), (b), (c) Leaves are used for ringworm; juice is used in eye disease; decoction is used in fevers.

19.	*Cuscuta reflexa Roxb.* Family: Cuscutaceae	Sarnolata	Climber (Parasite)	Stem	(a) Constipation, (b) liver disorder	(a), (b) Decoction of stem is useful in constipation, flatulence, liver complaints and bilious affections
20.	*Ipomoea aquatica Forsk.* Family: Convolvulaceae	Kolmi shak	Herb	Whole plant	(a) Lerosy, (b) fever, (c) jaundice, (d) bronchitis	(a), (b), c), (d) Plants are anthelmintic and carminative; useful in leucoderma, leprosy, fever, jaundice, biliousness, bronchitis and liver complaints.
21.	*Datura metel L.* Family: Solanaceae	Dhutra	Shrub	Leaf	(a) Rheumatic pain, (b) earache, (c) asthma	(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.
22.	*Calotropis procera R. Br.* Family: Asclepiadaceae	Akando	Shrub	Leaf	Arthiritis	Leaves are warmed over a fire and applied topically over the painful area after massaging with mustard oil and *a* pinch of salt.
23.	*Rauvolfia serpentina (L.) Benth.* Family: Apocynaceae	Sarpogandha	Shrub	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.
24.	*Centella asiatica (L.) Urban* Family: Apiaceae	Thankuni	Herb	Whole plant	(a) Loose motion, (b) dysentery, (c) stomach	(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.
25.	*Catharanthus roseus (L) G. Don.* Family: Apocynaceae	Nayantara	Herb	Whole plant	Child Leukaemia	Whole plant is plucked and made juice which helps in leukemia.
26.	*Azadirachta indica A. Juss.* Family: Meliaceae	Neem	Tree	Leaf	(a) Chicken pox, (b) jaundice, (c) pyorrhea	(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.
27.	*Mangifera indica L.* Family: Anacardiaceae	Amm	Tree	Gum, Leaf	(a) Fever, (b) toothache, (c) skindisease	(a),(b) Decoction of the leaves is given to cure fever, diarrhea and toothache. (c) Gums paste is used in skin diseases.
28.	*Litchi chinensis Sonn.* Family: Sapindaceae	Litchu	Tree	Fruit	(a) heart, (b) brain, (c) liver.	(a), (b), (c) Fruits are tonic to the heart, brain and liver.
29.	*Acalypha indica L.* Family: Euphorbiaceae	Muktajhuri	Herb	Leaf	Ringworm	Leaf paste with lime juice prescribed for ringworm. Leaf juice is emetic for children.
30.	*Terminalia arjuna (Roxb.) W. & A.* Family: Combretaceae	Arjun	Tree	Leaf	Blood pressure	Stem bark extracts mixed with cold water is taken orally daily in the morning on an empty stomach used for high blood pressure.
31.	*Cajanus cajan (L.) Huth.*	Arhar	Shrub	Leaf	(a) Piles, (b) jaundice, (c)	(a) Leaves are used in diseases of the mouth and piles; (b) +(c) Juice

	Family: Fabaceae				pneumonia	of leaves is laxative; given in jaundice and pneumonia.
32.	*Lawsonia inermis L.* Family: Lythraceae	Mehedi	Shrub	Leaf	(a) headache, (b) skin disease	(a), (b) Leaf paste is a valuable external application in headache, skin diseases.
33.	*Bombax ceiba L.* Family: Bombacaceae	Shimul	Tree	Gum	Burning sensation	A gum paste is used for burning sensation of body.
34.	*Coccinia grandis (L.) Voigt.* Family: Cucurbitaceae	Telakucha	Climber	Leaf	Hypertension	Leaf juice is taken in the morning for 7 days to normalize hypertension.
35.	*Hibiscus rosa-sinensis L.* Family: Malvaceae	Joba	Shrub	Flower	Burning wound	Flower paste is used for burning wound.
36.	*Ficus religiosa L.* Family: Moraceae	Pakur	Tree	Fruit	Asthma	The dried fruit, pulverized and taken in water for a fortnight removes asthma.
37.	*Ficus benghalensis L.* Family: Moraceae	Bot	Tree	Latex	(a) rheumatic pains, (b) lumbago	(a), (b) Applied externally to cracked or inflamed soles, to alleviate rheumatic pains and lumbago.
38.	*Ficus hispida L.f.* Family: Moraceae	Khoksha dumur	Tree	Fruit	Diabetes	Fruit juice mixed with water is prescribed for diabetes patients.
39.	*Artocarpus heterophyllus Lamk.* Family: Moraceae	Kathal	Tree	Root	Diarrhoea	Decoctions of roots are used internally in diarrhea.
40.	*Basella alba L.* Family: Basellaceae	Puishak	Climber	Leaf, root	(a) Constiation (b) toothache	(a) The juice of the leaves is used in constipation, particularly in children and pregnant women. (b) Root chewed for toothache.
41.	*Polygonum hydropiper L.* Family: Polygonaceae	Biskatali	Herb	Whole plant	(a) Liver disease, (b) wound	(a), (b) Juice of the plant is reported to be used in enlarged liver, wounds.
42.	*Amaranthus spinosus L.* Family: Amaranthaceae	Katanotey	Herb	Whole plant	Toothache	Decoction of the herb is used as a mouth-wash for toothache
43.	*Amaranthus viridis L.* Family: Amaranthaceae	Gaikhura, Shaknotey	Herb	Whole plant	(a) Heart Burn (b) Acidity	(a), (b) Leaves are boiled with roots and smashed then taken.
44.	*Enhydra fluctuans Lour.* Family: Asteraceae	Helencha	Herb	Whole plant	Fever	Plant is cooked with fish curry and taken to revive appetite after long weakness due to fever.
45.	*Abroma augusta L.* Family: Sterculiaceae	Ulot kambal	Shrub	Petiole	Weakness	Petiole is kept in water during night in morning juice is taken with sugar.
46.	*Boerhaavia diffusa L.* Family: Nyctaginaceae	Punarnava	Herb	Root	Diuretic	The root paste mixed with water is orally applied as a diuretic twice daily.
47.	*Polyalthia longifolia (Sonn.)Thw.* Family: Annonaceae	Debdaru	Tree	Bark	Fever	The bark is used as a febrifuge in the treatment of fever.
48.	*Acacia nilotica (L.) Willd. ex Del.* Family: Mimosaceae	Babla	Tree	Bark	Bronchitis	Bark extracts is taken orally to cure bronchitis.

49.	*Peperomia pellucida L.* Family: Piperaceae	Peperomia	Herb	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.
50.	*Kalanchoe pinnata (Lam) Pers* Family: Piperaceae	Pathor kuchi	Herb	Whole plant	Bites of insect	Leaves are diuretic, antilithic and insecticidal; applied to wounds, boils and bites of insects.
51.	*Justicia gendarussa* L. Family: Acanthaceae	Bijtarop	Shrub	Leaf	Headache	Leaf is covered with mustard oil then that leaf is put on the forehead.
52.	*Lablab purpureus* L. Family: Fabaceae	Shim	Climber	Leaf	Skin disease	Leaves are made paste and applied on skin to cure skin disease.
53.	*Psidium guajava* L. Family: Myrtaceae	Peara	Tree	Leaf, Bark	Diarrhea	For diarrhea boiled leaf decoction and stem bark is administered twice daily for a week.
54.	*Piper betel* L. Family: Piperaceae	Pan	Climber	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.
55.	*Solanum nigrum* L. Family: Solanaceae	Tutbegun	Herb	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.
56.	*Syzygium cumini* L. Family: Myrtaceae	Jam	Tree	Bark, Seed	(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.

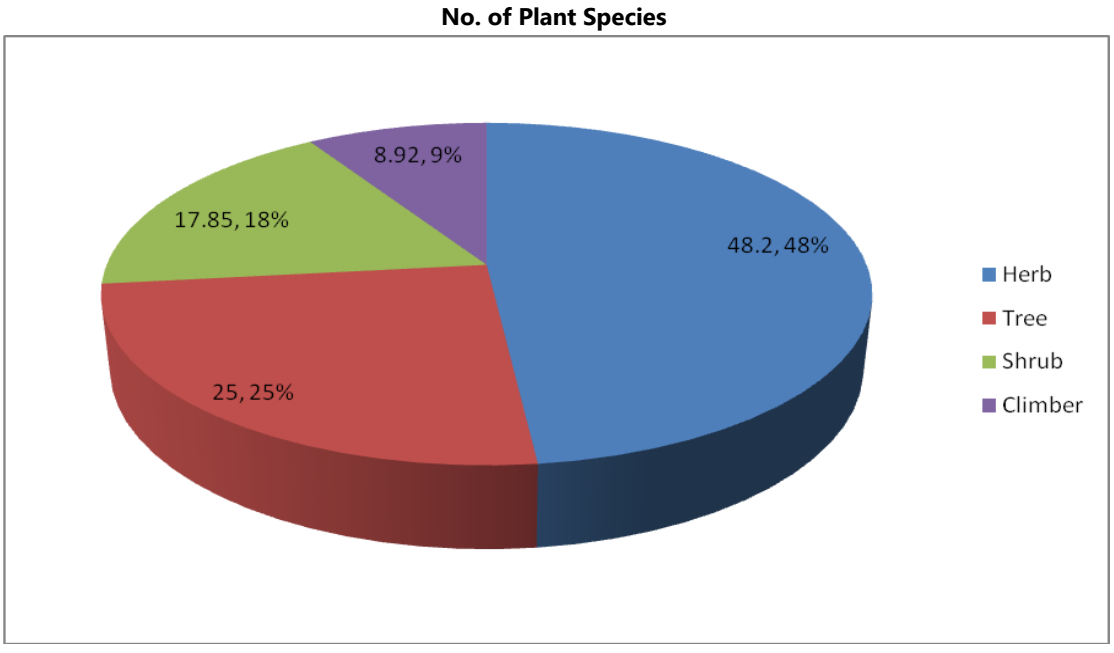

Figure 1 Habit of the recorded plant species in the study area

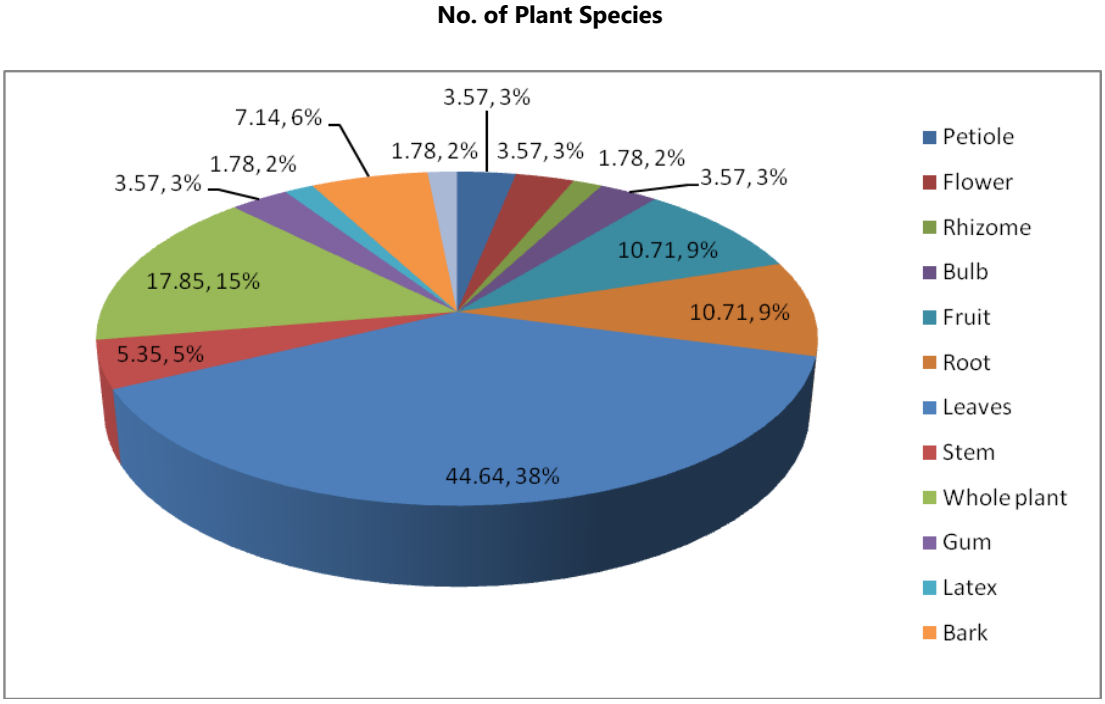

Figure 2 Plant parts used in different diseases.

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