

## IDENTIFICATION AND TRADITIONAL USES OF SOME COMMON MEDICINAL PLANTS IN EZINIHITE MBAISE L.G.A., OF IMO STATE, NIGERIA.

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### ABSTRACT

Medicinal plants are those plants that are used (parts, extract etc) in treating and preventing specific ailments and diseases that affect human beings. Hence the important role of medicinal plants in health care delivery (services) cannot be over emphasized. This research is on the identification and traditional uses of some medicinal plants in Ezinihitte Mbaise Local Government Area, furthermore the traditional use of medicinal plants for preventive and curative purposes among people of Ezinihitte Mbaise Local Government Area are handed down to the people from generation to generation and have become paramount in almost every household. To this extent several species of medicinal plants such as *Gongronema latifolia*, *Asminia triloba*, *Aspilia Africana*, *Azadirachta indica*, *citrus aurantifolia*, etc were identified to be naturally distributed in all the autonomous communities in Ezinihitte Mbaise Local Area. Most plant parts (extract) identified eg.( bark root, seeds, fruit, leaf). Serve as major source of active ingredient and products of secondary metabolites e.g Alkaloid, terpenoids etc used in curing diseases, production of drugs as well as in maintaining good health, by both the traditional and orthodox medical practioners. Several visits were made to the various autonomous communities between October 2008 and October 2009 for collection, identification and naming of the plants used. Plants press was used in the collection and preservation of the collected specimens. Two basic methods of drug preparations were used among others. These were the process of infusion (extracting active medicinal constituent of the plant through the medium of hot water (boiling) and Decoction (simmering the thicker and less permeable part of the plant for easy extraction of their medicinal constituent). The prepared infusion is then administered to the sick person for a period of time depending on the type of sickness. The administration of different plant parts for medicinal purpose underscores the pathgenomic essence of medicinal plants. Despite the acknowledged usefulness of medicinal plants to health care delivery, such inherent problems as lack of standard, quality control by the practitioners and secrecy still bedevils the activities of the practitioners. Furthermore agricultural and anthropogenic activities have resulted in loss of biodiversity and even extinction of some useful species. To this end adequate

machinery should be put in place to ensure sustainability and conservation of plants in botanical gardens. In conclusion the vital role of medicinal plants should not be left in the hands of the practitioners only rather a more holistic approach should be adopted. This will involve a synergy between the traditional and orthodox practitioners that will aim at formulating an integrative health system for the overall goal of maintaining, enhancing and sustaining good health care in Ezinihitte Mbaise in particular and the state cum country at large.

Key words: Medicinal plants, Infusion, decoction, leaf, root, bark.

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## **INTRODUCTION.**

Since the dawn of history, man has relied so much on medicinal plants for health and food needs. The traditional use of medicinal plants for curing and preventing illnesses, including the promotion of both physical and spiritual well-being among human beings particularly people of Ezinihitte Mbaise have become paramount in almost every household.

Several species of medicinal plants have been identified to be naturally distributed in all the autonomous communities in Ezinihitte Mbaise L.G.A. These communities include: Oboama/Umunama, Ife/Owutu, Chokoneze, Ihitte and Akpodim. Others include, Eziudo, Itu, Okpofe, Ezeagbogu, Amumara, while the rest are, Udo, Obizi and Onicha. Plant species of medicinal importance that are found in these communities include: *Asminia triloba* (paw paw), *Citrus aurantifolia* (lime), *Psidium*, *guajava* (Guava), *Zingiber*, *Officnelales*, *Azadirachta indica* (Neem/dogoyaro). Others include *Aspilia Africana* (Haemorrhage plant), *Venonia amagdalina* (Bitter leaf), *Gongronema latifolia* (Utazi ), among others.

The traditional use of medicinal plants in addressing certain health problems of every community in Ezinihitte Mbaise has been handed down from generation to generation. In the same vein, many of these plant species are known to majority as a source of medicine for treating a particular ailment, without the knowledge that two or more species could be mixed together to produce a more effective medicine. For instance, *Azadirachta indica* (Dogoyaro/Neem) is commonly known for treating malaria scourge, though it could also be used to treat ailments like hepatitis and intestinal problems when mixed with the bark and leaves of *Mangifera indica* with some fruits of *Citrus aurantifolia*.

Modern science has established new frontiers in the human search for knowledge, but there are still cluster of mysteries surrounding human physiology and chemistry which science is yet to discover. However, medicinal plants were found by the

people of Ezinihitte Mbaise as the major source of active principles capable of curing diseases and maintaining good health through indigenous knowledge. They continue to be important to people who do not have access to orthodox medicines; hence, the modern pharmaceuticals rely on these plants in compounding their drugs.

Fagbemi (1973) reported how traditional herbalists use medicinal plants instead of pills, they use powdered medicine instead of injection and they apply incision. Unlike the orthodox doctors, the traditional healers prepare their medicine from local herbs and administer them to their patients.

Cobiwy (1956) reported that one of the most important drugs obtained from tropical plants is quinine, used as a cure for malaria and this is obtained from the bark of several species of the genus *Cinchona*, all of which are small evergreen trees with a hard thick grey bark growing in the valleys of the Andes of southern America. The most important of the various alkaloids obtained from *cinchona* bark is quinine, with other numerous important alkaloids such as Cinchonine, Cinchonidine and quinidine. The relative proportion of these alkaloids vary in different species.

Iginta (1983) opined that about 80% of Nigerians home, maintain some sort of private family traditional medicine practioners. Existing data and contemporary researchers seems to authenticate the assumption for general health improvement of the masses by traditional healers. Traditional medicine is not only based on herbs but also on various aspects of biological resources such as the use of animals parts in the treatment of ailments and diseases.

This research aims at identifying and the traditional use of medicinal plant species in Ezinihitte Mbaise Local Government area of Imo State. It will further create serious awareness on the best method of preparing and administrating these medicines, the importance of medicinal plants and the need for domestication of medicinal plants.

## **MEDICINAL PLANTS**

Medicinal plants may be defined as those plants that are commonly used in treating and preventing specific ailments and diseases and that are generally considered to be harmful to humans. (Vernon, 1999).

These plants are either “wild plant species” those growing spontaneously in self maintaining populations in natural or semi-natural ecosystems and could exist independently of direct human actions or the contrasting “Domesticated plants species” those that have arisen through human actions such as selection or breeding and depend on management for their existence. For example *Aloe\_barbadensis* (Cole, 1996).

## **THE NATURE OF MEDICINAL PLANTS**

The role of food crops on which most human nutrition is based depends on the primary product of photosynthesis the carbohydrate, protein triglycerides (fats and oil).

In the case of most drugs, herbs, ethnomedicines, essential oils and cosmetics are derived from the secondary products of plant metabolism such as the alkaloids, terpenoids and flavonoids (He and Cheng, 1991). These substances have evolved as responses of plants to stress, predation and competition constituting to what is regarded as the vast chemical library of biological systems. Thus, it is usually “extracts” not the plants themselves or their parts such as fruits, seeds leaves etc; that are used for medicinal effects. However, medicinal plants possess what is referred to as pathological niche and they assume pathogenimic structure. This means that a medicinal herbs can be used for different ailments with respect to its on human physiology.

## **MATERIALS AND METHODS**

### **INSTUMENTS FOR DATA COLLECTION**

The most vital tools used in this investigation were resource persons such as known herbalists, aged men and women and other individuals who have the knowledge of medicinal plants and their efficacy.

Several visits were also made to the field with these resource persons who helped in identifying and naming of some of these plants and their medicinal uses.

### **PLANTS/SPECIMEN PRESS.**

The study observed the use of plant/specimen press in the collection and presentation of these medicinal plants in their required quantities for a particular drug preparation.

### **METHODS OF PREPERATION**

Different parts of the plant bark, leaf, seed, root, etc,- may be used in different ways for preparing drugs for different health conditions. This mainly rely on specific properties of the plants and that of the desired extract (Krahe 2001).

Two methods of drug preparation were often mentioned in this investigation as INFUSION and DECOCTION, among other ones that need not be prepared before administration such as chewing.

### **INFUSION.**

This is a simple way of extracting active medicinal constitutions of plants through the medium of hot water (boiling). The volatile components of the aerial parts like roots leaves, bark, flowers, fruits, etc, are extracted.

It may require single part of the plant such as the leaf or a combination of other parts of the same plant, such as the leaves, bark and the seed, Depending on were the active principles are mostly found in such plant it may also be a blend of different plant parts such as the leaves of *Azadirachta, indica* (Neem dogoyaro). *Mangifera, indica* (Mango) bark combined with *Asminia, triloba* (Pawpaw) leaves; the active medicinal constitutions

where extracted may be drunk hot or cold (Duke, 1984) in the treatment of malaria, jaundice, etc.

### **DECOCTIONS.**

This involves the simmering of the thicker and less permeable part of the plant such as the roots, bark, fruit and seed, for easy extraction of their medicinal constituents. The plant material is cut into smaller pieces, the simmering pot is covered to avoid losing the volatile components of the decoction, hence the solids are separated from the liquid.

### **DATA PRESENTATION ON MEDICINAL PLANTS COLLECTED, IDENTIFIED AND THEIR USES.**

The results of the various data collected is presented in the following procedure

- i. Names of medicinal plant (Botanical and common)
  - ii. Family name.
  - iii. Description.
  - iv. Preparation and administration.
1. *Azadirachta indica* (Neem/dogoyaro)



#### **Family: Meliaceae**

**DESCRIPTION;** This is a tree with serrated leaf margin. The leaf were found to be of high medicinal value and is used to treat all forms of malaria caused by *Plasmodium* parasite living in the blood stream.

#### **PRESENTATION AND ADMINISTRATION.**

A considerable quantity of freshly collected leaves are washed and pounded, some quantity of water is added to enhance easy extraction of the medicinal content. The leaves could also be boiled single in water and the medicinal content is extracted by infusion. Leaves are also mixed with a considerable quantity of *mangifera indica* (mango) bark and *Citrus aurantifolia* (lime) fruit and could be extracted by infusion.

The infusion is taken by a malaria patient ½ a tumbler, 3x daily for five (5) days.

2. ***Aspilia Africana* (Haemorrhage plant)**

**Family: Asteraceae/Compsitae.**

DESCRIPTION: This is a plant with tiny bristles all over and is commonly found in bushy farm-lands, Roadsides and open places etc. The flowers are stars shaped and yellow in colour.



### PRESENTATION AND ADMISTRATION

The leaves with the flowers are crushed together, their extract could be used to quicken blood clotting in wounds such as bruises, cuts, etc. The medicinal constituents could also be extracted by infusion and this is used as lotion for curing both fungal and bacterial infections on faces or any part of the body.

Patient with Bacterial and fungal infections could apply the infusion on the affected part twice daily, morning and afternoon until the affected becomes clear.

#### 3. *Costus afar* (Ginger lily/Bush cane)

**Family:** Zingiberaceae.

**DESCRIPTION:** This is a plant with smooth narrow and parallel leaf venation. The herb is commonly seen in secondary forests and in wet grounds. It does not branch, rather, the succulent stem bears the leaves alternatively. The flowers are tubular, yellowish and attached to the swollen terminal knobs.



### PRESENTATION AND ADMINISTRATION.

The leaf extract is by infusion and is used to treat cuts and sores by applying externally on the surface of the wound. The stem when chewed serves as fast relief for cough.

#### 4. *Gongronema Latifolia* (Utazi)

**Family:** Apocynaceae

**DESCRIPTION:** This is a climbing herb that exudes white gummy late when injured. It is commonly seen around homes. leaves serve as vital source of medicine.



#### **PREPARATION AND ADMINISTRATION.**

The leaves may be chewed raw, grounded and added to food. This serves as a fast relief for cough, catarrh and running nose. The medicinal constituents could be extracted by leaf infusion and is given to the patient at least twice daily for one week.

#### **5. *Psidium guajava* (Guava)**

**Family:** Myrtaceae

**DESCRIPTION:** it is a medium sized tree with hard woody stem. It bears whitish flower with opposite arranged simple leaves. The medicinal parts are the leaves, stem, fruit and root.



#### **PREPARATION AND ADMINISTRATION.**

**THE LEAF:** The leaves extract are obtained by infusion and could be used to bath regularly for the cure and prevention of malaria fever.

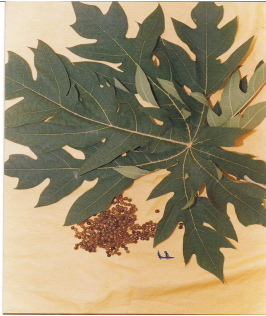
**THE BARK:** The medicinal constituent is extracted by decoction. The decoction is allowed to turn pale yellow which shows diet extraction of the necessary active ingredients. This is also used for the treatment of malaria fever. It could be taken by the patient 3 spoonful, 3xdaily for five (5)days. It is also used to treat *gastroenteritis* in infants.

**THE ROOT:** The medicinal constituents of the root is also extracted by decoction and is used to enhance potency in men. The extract is taken ½ a tumbler 2xdaily until treatment last.

**THE FRUIT:** The seeds of unripened fruit when chewed enhances normal sperm count in men hence it is used in the production of drugs which helps to increase sexual urge in men. This is particularly obtained from the bark of unripe guava fruit.

**6. *Asmina triloba*: (PAW-PAW) Family Caricaceae  
ROOT, BARK, LIME AND PAW-PAW LEAVES.**

A blend of the above when prepared by extracting their infusion is an effective medicine used in the treatment of malaria. The extract is normally put in a clean plastic container and is taken with a tumbler 3xdaily for 3 days.



**7. *Vernonia amygdalina* (Bitter leaf) Family: Compositae.**



**DESCRIPTION:** This plant is usually found around homes. It has broad greenish leaves that contains natural quinine which has bitter taste. It is used for food, especially in cooking soup. The medicinal constituent (quinine) cures malaria, cleans the liver and lymphatic system and lungs for smokers and could also be given to patients suffering from hyperglycemia (excessive sugar) as in diabetes mellitus and diabetes insipidus.

**PREPARATION AND ADMINISTRATION.**

The leaf extract is usually by infusion. It could also be squizzed to extract the medicinal ingredients (quinine).

The extract is given to the patient suffering from hyperglycemia (excessive sugar) one glass tumbler twice daily until the blood sugar reduces.

The extract as a result of its natural quinine, kills the plasmodium parasites that inhabits the blood stream of the patient when taken with a glass cup 3xdaily for seven days.



## 8. *Ocimum gratissimum* (Scent leaf) Leguminosae – papilionoideae

**Family: Labiatae**

### **DESCRIPTION:**

**8. *Ocimum gratissimum*:** This is a shrub seen around homes. They may be deliberately or otherwise planted. The leaves are fragrant with serrated margin. It has dense flowers infirm of clusters borne on common stalks. It could also be used as vegetable crop. And in the treatment of catarrh and cough when smelled, it also serves as mosquito repellent.



### **PREPARATION AND ADMINISTRATION.**

***O. gratissimum*** is used in the treatment of stomach disorder such as gastroenteritis in infants and adults. It is also used to treat cholera, diarrhoea and vomiting when blended with the leaves of *P. Sentalinoides* and prepared by infusion. In case of gastroenteritis in infants, the infusion is taken by the child two teaspoonful, 2xdaily for five days.

In the treatment of cholera and diarrhoea, the leaves of both plants are ground together and the medicine is extracted by adding little quantity of water. This is given to the patient one teaspoonful, 3xdaily until water stooling and vomiting stops.

## **9. *Pterocarpus Sentalinoides*:**

**DESCRIPTION:** This is a perennial tree plant with hard-woody stem and opposite arrangement. It has broad leaves with network veination. The plant is also commonly seen around homes and is sometimes used to make hedges or farm-land demarcations. The leaf forms medicinal part.

## **10. *Cocos nucifera* (Coconut)**

**Family: Aracaceae or palmae.**

**DESCRIPTION:** This is a tree plant widely distributed in Ezinihitte Mbaise Local Government Area. It has been traced to have been introduced from the coastal areas of tropical and sub-tropical rainforest zones where rainfall is over 2500mm per annum. The oil is extracted from the endosperm (kernel) and retained as cocoa nut oil. The oil is used to prepare food while the cake formed is a good livestock feed. The oil is used

largely in margarine production as well as in soap making. The enclosed endosperm (kernel) or even the water inside the endosperm are used as an antidote for synthetic drugs when over-dose is taken. The endosperm (kernel) is eaten as food and is a good source of vitamin C and high density Lipoprotein (LDL).

## **DISCUSSION**

A number of medicinal plants ranging from grasses to shrubs and to tall tree have been studied. Some exist in the wild, while others are domesticated.

The basic active ingredients used for treating various ailments are accumulated in the different parts of plants such as leaves, root, bark, seeds and sometimes the fruits. The extraction of these active ingredients require different methods such as infusion, decoction, chewing of the plant part such as the seed, fruit or even the leaves. The different methods of preparation depends on the part of the plant by which these active ingredients are found. Infusion were particularly used on leaf extracts while decoction were used on roots, bark and certain seed extracts. Some herbs were discovered to have the ability of curing or ameliorating a number of ailments while some are specific on a particular ailment. Administration of medicinal extracts varies with the different ailments and parts of the body in which they are used for. This buttresses the path genomic essence of medicinal plants whose various parts specifically affects the various human anatomy.

### **ENVIRONMENTAL AND DEVELOPMENTAL CONSTRAINTS.**

Despite the acknowledged importance of medicinal plants in Ezinihitte Mbaise Local Area, the application of medicinal plants to health problems are still generally unknown, poorly organized and regulated while most are being exploited with little or no regarded to the future. (Sirvastava et al, 1996). In Ezinihitte Mbaise Local Government Area, one of the most problems facing the use of medicinal plants is that the vast majority of medicinal plants grow in the wild and are under threat as a result of Agricultural and *anthropogenic interference*, however few are domesticated with or without the knowledge of their efficacy for treating most common ailments and diseases in the area.

### **MAINTENANCE OF MEDICINAL PLANT RESOURCES.**

Medicinal plants form part of the natural ecosystems, their exploitation despite how sustainable, will inevitably have some effect on the biodiversity of these systems leading to change or even loss of some species with vital curative ingredients (FAO 1996). Utilization should therefore always go hand in hand with means to ensuring sustainability and conservation of the resources. Such means or measures include:

1. Non-destructive harvesting.
2. Setting aside, reserve areas and cultivation of botanical gardens
3. Conservation and recovery of threatened medicinal plant species.

4. Introduction of new species into cultivation to take the pressured off wild species population.
5. Establishment of conservation stock and collection of seeds or other propagates for ex-situ germplasm.
6. Proper management of the populations of endemic species to maintain their demographic integrity and genetic variability (Sirvastava et al. 1996).

### **CONCLUSION AND RECOMMENDATIONS.**

Any plan of action for enhancing a sustainable identification and traditional uses of medicinal plants in Ezinihitte Mbaise L.G.A, must be tailored to the specific needs of particular situation in the appropriate method. The identification and traditional use of any plant as source of medicine, together with its use for treating a particular ailment is not a harphazard task and there fore requires carefulness during preparation to avoid contamination and poisoning of the body cells during administration. Furthermore, the efficacy of any plant as medicine cannot be determined through guessing, but by knowing the major active principles (ingredients) in such plant and what it is capable of curing. This calls for further research and analysis of the popular medicinal plants and consequent integration of traditional medicinal plants in the nations health sector.

From the fore-going, it has become obvious that traditional health care delivery in Ezinihitte Mbaise Local Government Area make use of traditional plants which have played a significant role in health care delivery in the Local area.

Some of the medicinal plants identified so far should serve as guide to the Government, health care workers, Agricultural extension expert and even modern medicinal experts in formulating an integrative health system that could serve the common goal of maintaining, enhancing and sustaining good health care in Ezinihitte Mbaise L.G.A. So all hands must be on deck to properly harness these God given medicinal plants for the betterment of the society at large. Finally, there should also by synergy between the traditional medicine practitioners and the orthodox medicine experts towards achieving a holistic health care delivery in Ezinihitte Mbaise aim Imo State in particular and Nigeria at large as is obtainable in the United States of America, China, India, Germany etc, where complementary and alternative medicine (CAM) exit hand-in-hand with the orthodox western medicine (Cowley, 2002).

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