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An Ethno-botanical survey of Some Medicinal Plants Available in Some Localities of Kogi State, Nigeria

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Abstract

Information on plants is obtained through ethno-botanical surveys, which involves the study of plants in relation to the culture of the people. Many plants are used in African traditional medicine, but little information is available on their active ingredients/constituents. Ethno-botanical surveys involve the interaction with the people and their environment and are therefore participatory approaches, in which local people are able to contribute their knowledge on the uses of plants within their environment. This study presents an ethno-botanical survey of the traditional medicinal plants that are available in some localities in Kogi State, Nigeria. The species name, family name, common name, part used and medical applications were compiled for reference sake and further study. Available information about the traditional medicinal plants and ethno-botanical studies were conducted. The study showed the species, and families of medicinal plants recognized as being used by most of the people in Nigeria for the treatment of various common illnesses, sicknesses and diseases. The traditional medicinal practices have a wide acceptability among the people in the localities, resulting from believe in their effectiveness in treating varieties of diseases. The study also revealed variations in the applications of the medicinal plants. The parts that are used include leaves, roots, stem, bark, fruits, or a mixture or solution of two or more of the plants species.

Keywords: Medicinal plants, ethno-botanical, Kogi, family name, diseases, species

1.0 Introduction

There are a number of medicinal plants with their curative values that were reported in different research works [1]. Scientific research and validation on medical plants are now easy due to accessibility of enormous available pieces of information from researches globally. Preliminary scientific knowledge is drawn

from studies on *in vitro* and *in vivo* bio-assays on crude extracts of various plants. Using plants as medicine provides significant advantages for treating many chronic conditions. For example, information from folklore medicine in Nigeria has it that *Rauvolfia vomitoria* is used for treating hypertension and other nervous conditions while *Ocimum gratissimum* is used for treating diarrheal diseases. Others include *Citrus paradise* seeds for resistant urinary tract infections, pure honey for chronic wound treatment, *Carica papaya* seeds for intestinal parasites, *Garcinia kola* seeds for pain and inflammation, and *Aloe Vera* for skin diseases. The same is also true for plants from other African countries [2]. Knowledge of most of these curative properties was accumulated over time from evidence-based observations. The curative properties of herbal medicine are validated through scientific investigations, which seek to understand the active chemistry of the plants [3]. The therapeutic activity of a plant is due to its complex chemical nature with different parts of the plant providing evaluating conditions of ill-health of an individual and its management. These traditional health care services are provided through tradition and culture prescribed under a particular philosophy, in which the norms and taboos therein are strictly adhered to and form the basis for the acceptability of traditional health practitioners in the community they serve [4]. According to the World Health Organization (WHO), health is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [5]. The combination of physical, mental/emotional, and social well-being is commonly referred to as the health triangle. The recognition of disease and illnesses in traditional Africa meant that every society needed to devise means of containing its problem. Globally, different societies have different herbal traditions that have evolved over a long period of time. Similar to modern day Western treatment patterns, African traditional societies also involved herbalism, surgery, dietary therapy, and psychotherapy, in addition to traditional exorcism, rituals, and sacrifice [6]. These medical technologies had evolved even before the coming of the Arabs and Europeans. Successful treatments became formalized, sometimes with prescriptions of correct methods of preparation and dosage. In addition, the ingredients and the manner of preparation varied with the ailment but were also dependent on various factors such as geographical, sociological, and economic, but the significant point was that in many cases, patients were cured of their physical or psychological ailments [7].

The various ethnic groups in Nigeria have different health care practitioners aside their western counterparts, whose mode of practice is not unlike in other tribes. Traditional/herbal medicines have impacted the lives of people, especially in the rural areas where access to orthodox Medicare is limited [9].

This research work focused on an ethno-botanical survey of some medicinal plants available in some localities of kogi state including their family names, common names, parts used and disease they are used to treat.

2.0 materials and methods

The ethno-botanical surveys was conducted and the family, specie, and Commonwealth's names, including part used and Medicinal uses of the various plant parts were obtained from traditional medicine practitioners from Local areas of Kogi East (Olamaboro), West

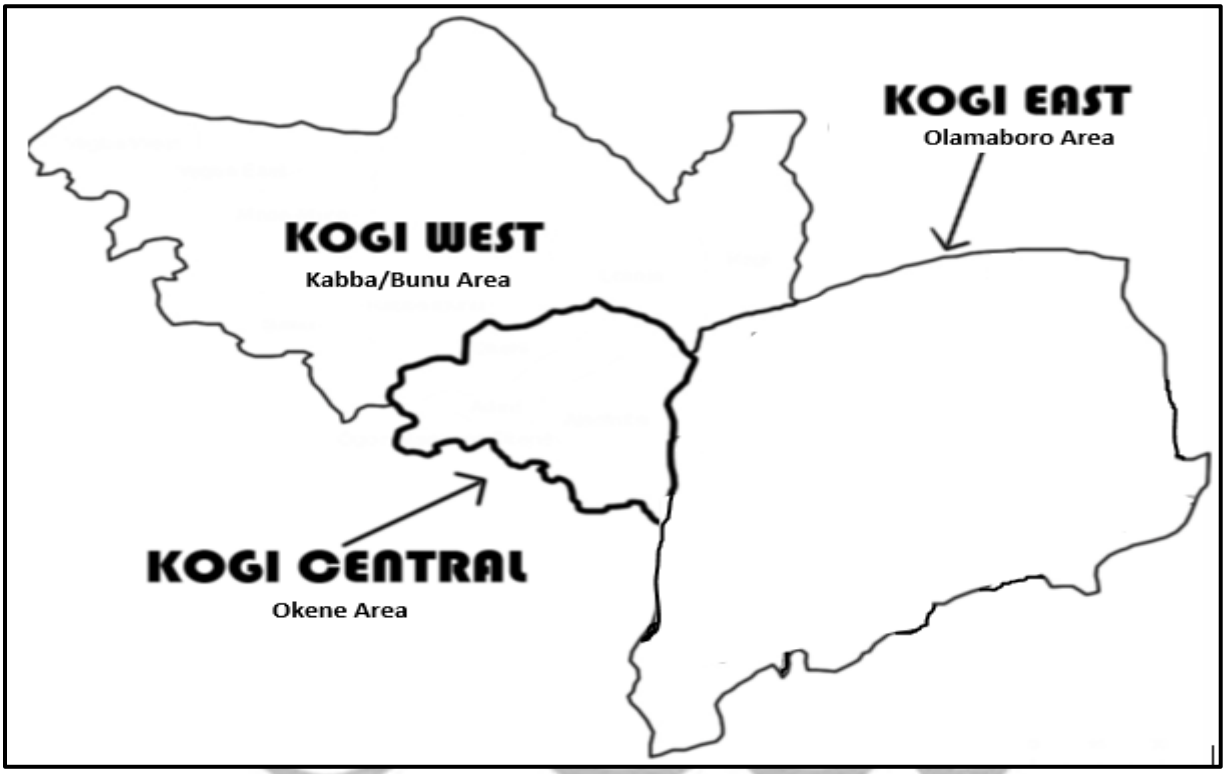

Fig. 1: Map of Kogi State showing the location of Kabba, Okene, and Olamaboro Study Areas

(Kabba), and Central (Okene) in Kogi State. Figure 1 shows the map of Kogi State where the research was carried out. The Data obtained were collected and tabulated to give the botanical names, common names, families, parts used and the diseases or ailments they cure.

3.0 Results and Discussion

A representation of a range of medicinal plants in Kogi state obtained from some markets and localities were identified and recorded including some of the ailments they cure as reported in Table 1. The plants were indigenous reflecting the localized nature of the indigenous knowledge about these medicinal plant species. Most of the medicinal plants used in the study areas were trees. This may be as a result of availability of these trees throughout all seasons. Varieties of diseases can be treated using the plants including treatment of a number of diseases such as diabetes malaria, typhoid, jaundice, hyperthermia, skin irritations, dysentery, anaemia, gonorrhea, cough, measles, fibroid and so on. History shows that many plants have been used as a source of medicine in Nigeria for a long time to treat different ailments and the traditional way of treatment has become an integral part of culture of the people. In preparing the treatments from the plants, the local

people mainly use roots, leaves, stem, barks, flowers, fruits and young shoots [8] as shown in Table 2. The leaves were the most reported plant parts utilized by the traditional doctors for the preparation of various medications. Salisu *et al* [8] reported that leaves were

Table 1: List of medicinal Plants and their Applications

Species Name	**FAMILY NAME**	**Common Names**	**Parts Used**	**Medical Applications**
Abelmoschus esculentus	Malvaceae	Okra, lady's finger	Fruit, seeds	Fevers, gonorrhoea, dysentery, Catarrhal infections, emollient, antispasmodic, tonic
Alstonia congensis	Apocynaceae	Stool wood	Bark	Malaria, astringent, toothache.
Alternanthera repens	Amaranthaceae	Joy weed	Whole plant	Dysentery, antimicrobials, dysmenorrhea, filariasis, fracture, joint pains
Amorphophallus dracantioides	Anacardiaceae		Tubers	Asthma, piles, snakebite remedy, arrow poison
Annona muricata	Annonaceae	Sour sop	Leaves, fruit,	Fever, dysentery
Baphia nitida	Papilionaceae	Cam wood	Leaves, bark, roots, twigs	Constipation, skin diseases, venereal diseases, ringworm, enema, flatulence, smallpox
Blepharis maderaspatensis	Acanthaceae		Whole plant	Snake-bite antidote
Bombax buonopozense	Bombaceae	Akata, red silk cotton tree	Bark, leaves, fruits, flowers.	Stomachache, blood tonic, emmenagogue, emollient
Borreria verticillata	Rubiaceae	African borreria	Leaves, roots	Gonorrohea, skin diseases, dysentery, antibilharzia, abortifacient, diuretics, anti-leprosy
Boswellia spp	Burseraceae		Bark	Anti-snake venom
Bridelia micrantha	Euphorbiaceae	Mitzeeri sweet berry	Leaves, roots, bark	Laxative, young leaves chewed for headache, migraine.
Caesalpinia Bonduc	Leguminosae	Bonduc nut, physic nut, yellow nicker	Roots, leaves, seeds	Fever, anthelmintics, respiratory diseases
Caladium bicolor	Araceae	Christ plant, heart of Jesus	Leaves, Rhizome.	Topical application for boils, wound, ulcer, purgative, convulsion
Capsicum frutescens	Solanaceae	Chili pepper, bird pepper	Fruits, seeds	Fevers, dysentery, stimulant, Carminative, malaria, ingredient of some herbal recipes.
Carpolobia lutea	Polygalaceae	Cattle stick	Leaves, bark	Rheumatism, aphrodisiac, toothache
Catharanthus roseus	Apocynaceae	Rose periwinkle	Leaves, whole plant	Diabetes, hypertension, antileukaemic properties, antitumour, dysentery, Menorrhagia
Celosia laxa	Amaranthaceae	Celosia	Leaves	Antiscorbutic, purgative

Daniellia oliveri	Leguminosae	African copaiba, balsam tree, niger-copal, maaje	Gum, bark	Dysentery, diarrhoea, toothache, urinary infection, astringent, tooth ache
Datura stramonium	Solanaceae	Stink weed, thorn apple, devil's trumpet, jimson-weed	Leaves, seeds, root	Asthma, cough, astringent, aphrodisiac, mental disorders, gonorrhoea, lumbago, neuralgic, insomnia, anodyne, sedative, antispasmodic
Dennettia tripetala	Annonaceae	Pepper fruit	Fruit, leaves, stem-twigs.	Insect repellant, fever, cough, toothache, stimulant
Dioscorea dumetorum	Dioscoreaceae	Wild yellow yam, African bitter yam, three-leaved yam.	Tubers, leaves	Colic, abdominal, vomiting, analgesic, skin disorders, psychic trouble, malaria, ease labour, anti-bilharzia.
Dioscoreophyllum cumminsii	Mennispermaceae	Serendipity berry	Fruits, leaves, roots.	Diabetes, obesity, impotence, tonic for debility.
Drynaria Laurentii	Polypodiaceae	Drynaria	Whole plant, leaves.	Venereal diseases.
Eichhornia Crassipes	Pontederiaceae	Water hyacinth	Whole plant	Skin care, fresh juice for wounds, styptic, goitre, protecting feet as foot wears
Elaeis Guineensis	Palmae	Red oil palm	Root, palm oil, bark, kernels	Malaria, mental disorders, diarrhoea, asthma, measles.
Eleusine indica	Poaceae	Bermuda grass, wiregrass, fowl foot	Leaves	Coughing with bloody sputum, antipyretic, anthelmintics, venereal diseases.
Ficus asperifolia	Moraceae	Sandpaper plant	Leaves, root	Wounds, coughs.
Gardenia Ternifolia	Rubiaceae	Yellow gardenia, gaude.	Roots, fruits	Fever, cough, stomachache, dysentery, skin lesion, emetic
Glyphaea brevis	Tiliaceae	Atori, masquerade stick	Stem bark, leaves, stem-twigs	Diarrhoea, fever, respiratory ailment, gonorrhea, wound, toothache, gum infection
Gmelina Arborea	Verbenaceae	Gmelina, parrot's beak	Roots, leaves	Antipyretic, stomach disorder, cough, gonorrhoea, demulcent
Gongronema Latifolium	Asclepiadaceae	Amaranth globe	Stem	Sore gums, colic, dyspepsia, anthelmintic.
Grewia Pubescens	Tiliaceae	Raisin	Stem, leaves	Dysentery, gastro-intestinal disorder, antidote for snake bite, boils, emollient
Grewia sp	Tiliaceae		Fruits	Religious purpose, mystic, soup with okra-like taste
Grewia venusta	Tiliaceae	Raisin	Leaves, twigs, stem bark	Fever, boils, wounds, colic, anti-diarrhoea, ease of labour
Helianthus Annus	Compositae	Sun flower	Seeds, leaves	Diuretic, pulmonary disorders, expectorant

Heliotropium Indicum	Boraginaceae	Heliotrope, cock's comb	Whole plant	Convulsions, cancer, worms, rectal enema, mouth-wash.
Hexalobus crispiflorus.	Annonaceae	Hexalous	Roots, whole plant	Gonorrhoea, cough, malaria,
Hibiscus Sabdariffa	Malvaceae	Zobo, Jamaican sorre, roselle	Leaves, flowers	Diuretic, coughs, dressing wounds, beverage
Hybanthus enneaspermus	Violaceae	Hybanthus	Whole plant	Easy and painless child delivery.
Indigofera Arrecta	Leguminosae	Indigo	Leaves, twigs.	Diarrhoea, dysentery.
Indigofera macrophylla	Leguminosae	Indian-indigo	Leaves	Whooping cough, bronchitis, piles, ulcers, enlargement of spleen and liver, skin diseases.
Ipomoea Asarifolia	Convolvulaceae	Morning glory	Whole plant, leaves, flowers	Haemorrhage, urinary problem, purgative, syphilis.
Ipomoea involucrata	Convolvulaceae	Morning glory	Leaves	Convulsions, purgative, eye drops, asthma, arthritis, antipyretic, yellow fever, filariasis, gynaecological diseases, gonorrhoea.
Jatropha gossypiifolia	Euphorbiaceae	Wild Cassava	Stem latex	Ringworm, ascaris, anti-tumour, malaria, dysentery, dysmenorrhoea.
Jatropha Multifida	Euphorbiaceae		Sap	Coated tongue
Jussiaea Linifoliio	Onagraceae		Leaves	Malaria.
Kalanchoe crenata	Crassulaceae	Never die, Dog's Liver, kalanchoe	Leaves, roots,whole plant	Smallpox, convulsion, gonorrhoea, Rheumatism, ear problem, chronic cough, headache, wounds, asthma, palpitation, mental disorder, anthelmintic.
Kigelia Africana	Bignoniaceae	Sausage tree	Root, stem bark, fruits, leaves	Kidney disorders, malaria, dysentery, rheumatism, gonorrhoea. haemorrhage, spleen infection, astringent, leucorrhoea, cough.
Lactuca Capensis	Compositae	Lettuce	Leaves, whole plant	Diuretic, constipation.
Lagerstroemia speciosa	Lythraceae	Queen crape-myrtle	Leaves, ripe fruits	Antidiabetic, stimulant
Laggera alata	Compositae	Laggera	Leaves, roots, sap	Fever, rheumatic pains, pneumonia, emmenagogue, tapeworms, convulsion.
Landolphia Dulcis	Apocynaceae	Sweet landolphia	Roots, stem	Rheumatism, cough, kidney diseases
Leea guineensis	Leeaceae	Hansidhapan, leea	Leaves, roots, seeds.	Pregnancy detection, purgative, toothache, gonorrhoea, general weakness.
Lycopersicon esculentum	Solanaceae	Tomato	Leaves, fruit	Ear-ache, urinary troubles, carminative, fever, boils, fungal infections, antimicrobial.

Lycopodium cernuum	Lycopodiaceae	Creeping club Moss, Lycopodiella cernua	Whole plant	Malaria, newborn skin management.
Manihot esculenta	Euphorbiaceae	Cassava	Leaves, tubers, stem bark	Gonorrhoea, purgative, ulcer, eye drop, schistosomiasis, toothache.
Mimosa pudica	Mimosaceae	Sensitive plant, shame plant	Leaves	Guinea worms piles, kidney disease, fistula, boils
Musa sapientum	Musaceae	Banana	Leaves, fruits	Jaundice, mental disorders, typhoid fever, diarrhoea, malaria.
Nauclea latifolia	Rubiaceae	Nauclea, African peach	Inner bark, stem sap, roots, fruits, root-bark	Cough, febrile conditions, thrush, jaundice, piles, emetic, menstrual disorders, stomach disorders, measles, sore
Newbouldia laevis	Bignoniaceae	Tree of life, fertility tree	Bark, leaves, root	Round worms, elephantiasis, dysentery, malaria, convulsions, migraine, cough, yellow fever, stomach-ache, hernia, infertility, ear-ache.
Nicotiana tabacum	Solanaceae	Tobacco	Leaves	Ringworm, cold, convulsions, ulcers, nausea, anthelmintic.
Nymphaea lotus	Nymphaeceae	Water lily	Whole plant	Vomiting, astringent, antiseptic, demulcent, sedative, rheumatic pains, Anti-tumour.
Ocimum basilicum	Labiatae	Sweet and Hairy basil	Whole plant	Gonorrhoea, catarrhal conditions, cough, constipation, dysentery, ringworm, carminative, stimulant, hypertension, anthelmintics, antipyretic, blood tonic.
Ocimum Gratissimum	Labiatae	Tea bush, balsam, basil	Leaves, whole plant	Cough, diarrhea, convulsions, fever, cold, bronchitis, colic insect repellant, antimicrobials, anthelmintics, hypertension, hypertension, diabetes, piles, Antibacteria.
Olax subscorpioidea	Olacaceae	Olax ,stink ant forest	Roots, leaves, stem, bark, twigs	Yellow fever, jaundice, guinea worm, venereal diseases, mental disorders, toothache.
Pachira glabra	Bombacaceae	Guinea peanut,lucky tree	Bark, leaves, seeds	Stomach disorders, headache, blood tonic
Parquetina nigrescens	Periplocaceae	African parquetina	Leaves,latex,bark, roots	Gonorrhea, skin diseases, menstrual disorders, cardiac tonic, dysentery, Blood tonic.
Phyllanthus amarus	Euphorbiaceae	Phyllanthus, amarus plant	Whole plant	Gonorrhoea, genito-urinary diseases, asthma, diabetes, typhoid fever, jaundice, stomach-ache, dysentery, ringworm, hypertension.
Polyalthia Suaveolens	Annonaceae		Roots	Fever

Pyrenacantha Staudtii	Iccinaceae		Stem, root barks	Cancer
Ziziphus spina-christi	Rhamnaceae	Christ plant,thorns of Christ	Bark,roots,seeds	Cough, respiratory problems, astringent, yellow fever.

predominantly used in African nations like Uganda, Ethiopia and Mali in different ways to prepare plants for treatment purposes. Although these comparative studies were not carried out in similar habitats, they do not differ from findings of this survey conducted in the Kogi localities.

4.0 Conclusion

The findings of the ethno-botanical survey of medicinal plants in this study showed that the effort of traditional healers in preserving and conserving medicinal plants in most parts of Africa were not sufficient for future sake. Nevertheless, there is an attempt to promote traditional health practices alongside modern health services. Part of observation made in this study is the recent decrease in economic values placed on medicinal plants resulting in withdrawal of most traditional healers from the practice and services. This studies revealed that documentation on ethno-botanical knowledge is a way to understand the use of different plant species to cure various ailments and a means to conserve these natural resources by engaging the traditional healers.

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