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An Ethnobotanical Survey of Herbal Markets and Medicinal Plants in Lagos State of Nigeria

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ABSTRACT

An ethno-botanical survey of three largest herbal markets and medicinal plants used for treating ailments in Lagos state of Nigeria was undertaken by means of oral and written questionnaire. Traditional medicine is undoubtedly a reliable alternative approach to health care delivery in the metropolis because it is cheap, easily accessible, and efficacious. Herbs are obtained from bushes around the neighbourhood and forests from adjacent states. Recipes for the treatment of common ailments which are reported almost on daily basis such as hypertension, dysentery, low sperm count and weak erection, coated tongue, pile, menstrual disorder, leucorrhoea and fevers were given by the practitioners. Moreover, a list of medicinal plants and their reported folkloric uses was compiled during the survey. Apparently, daily health issues of Lagosians are partly taken care of by traditional medicine and its use is on the increase in Lagos state. The efforts of the Lagos State Traditional Medicine Board and Nigeria Natural Medicine Development Agency are praised in facilitating recognition of herbal medicine in the metropolis. Government should help in the area of conservation of medicinal plant and protect patent right of the Traditional Medicine Practitioners to encourage release of information.

INTRODUCTION

Animals live in equilibrium with the plants surrounding them, using these plants as sources of food and intuitively or through years of trials and error, as medicine. Traditional medicine refers to health practices, knowledge and beliefs incorporating plants, animals and mineral based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well being (NNMDA, 2008; WHO, 2005) . The use of plants as medicine to cure or prevent illness and to lubricate the wheels of social interaction at the interpersonal and group level is a behaviour that predates civilization, and in today's civilization, it is found in every society irrespective of its level of development and sophistication (Odugbemi, 2006).

The earliest references to these medicinal plants as cure for diseases are to be found in the manuscript of the "Eber papyrus" which contains 700 medical formulas and it dates back to 16th century B.C (Simpson and Ogorzaly, 1986). The drugs of today's modern society are products of research and development by major pharmaceutical companies but among the most important raw materials researched and developed are naturally occurring materials obtained from plants. Hence, when we take well packaged medicines today, it is well to remember that we might be taking a processed plant product. Interest in medicinal plants as a re-emerging health aid has been fuelled by the rising costs of prescription drugs in the maintenance of personal health and well-being, and the bio-prospecting of new plant-

derived drugs. Based on current research and financial investments, medicinal plants will, seemingly, continue to play an important role as a health aid (Hoareau and DaSilva, 1999; Moerman, 1996).

In spite of the millions of chemical compounds currently synthesized in the laboratory, and available for screening for action of therapeutic value, natural products, particularly of plants origin remain the most important sources of new drugs (Odugbemi, 2006).

The use of medicinal plants constitutes an important part of traditional medicine which is a part of African heritage. Though modern / orthodox medicine has improved the lot of many people worldwide, it is noteworthy that in many cultures, modern medicine complements traditional practices as is obtainable in industrialized societies e.g. China and India (Odugbemi, 2006). In these societies, herbal remedies have become more popular in the treatment of minor ailments, and also on account of the increasing costs of personal health maintenance. Indeed, the market and public demand has been so great that there is a great risk that many medicinal plants today, face either extinction or loss of genetic diversity.

In Nigeria, the majority of citizens still use medicinal plants and visit traditional medicine practitioners for their health care need (Odugbemi, 2006). It was reported by WHO that in Nigeria, the ratio of Traditional Health Practitioners to the population was 1:110, while the ratio of Medical Doctors to the population was 1:16, 400 (African Health Monitor, 2003). This gives credence to the fact that people patronise Traditional medicine practitioners (TMPs) for their primary health needs more than orthodox medical doctors.

Medicinal plant is defined as any substance with one or more of its organ containing substances that can be used for therapeutic purposes or which can be used as precursors for the synthesis of antimicrobial drugs (Sofowora, 1982, 1984). It is estimated that there are about 250, 000 – 500, 000 species of plants on earth (Borris, 1996), of which a relatively small percentage (1-10%) of these are used for food by humans and animals. It is possible that more serve medicinal purposes (Moerman, 1996). Medicinal plants contain numerous biologically active compounds such as carbohydrates, proteins, enzymes, fats and oils, minerals, vitamins, alkaloids, quinones, terpenoids, flavonoids, carotenoids, sterols, simple phenolic glycosides, tannins, saponins, polyphenols, to mention a few which have medicinal activities.

Lagos State is a city in the South-Western part of Nigeria, located on the Bight of Benin. It is the largest city in Nigeria (in terms of population size), the chief port as well as the economic and cultural centre. The metropolitan area spreads over much of the state, covering about 3557 sq. km. It has a diverse and fast growing population resulting from heavy and on-going migration to the city from all parts of Nigeria as well as neighbouring countries. The population of its metropolis increased to about 10.1 million in 2003 and the United Nations predicted that the city's metropolis will exceed 20 million come 2010.

This population explosion means that the city's infrastructure will be under stress. The primary health care sector, largely the responsibility of the Local Government with support from the State Government, might not be able to cater for everyone in the state. Hence, TMPs will have more people coming to them for their health care needs. This invariably brings medicinal plants, which are and would be in high demand, under threats of extinction. This trend would have serious consequences on the survival of some plant species, hence the need to conserve them. Conservation of medicinal plants is, therefore, an important step that should be taken in order to prevent the extinction of threatened species of medicinal plants. Because of the foregoing, the study was undertaken in order to provide information on how much in demand the medicinal plants, availability status of the plants, method of collection, preservation methods before marketing, medicinal plant farm and conservation methods.

MATERIALS AND METHODS

Information was obtained from herb sellers and traditional medicine practitioners by the means of questionnaire from three popular and largest markets in Lagos: Oyingbo, Mushin and Bariga, located within the Lagos mainland where the largest proportion of Lagosians dwell. Cross referencing of facts was carried out at the Lagos State Traditional Medicine Board and the Nigeria Natural Medicine Development Agency (NNMDA. Relevant literature and the University of Lagos Herbarium were consulted for plant nomenclature authentication (Gbile, 1984). A list of medicinal plants and their reported folkloric uses was compiled during this survey. Also, some recipes used for curing several ailments are also reported in the study.

Some of the questions that were responded to included: market location, sex of practitioner, medicinal plants sold, medicinal uses of the plant, do you give herbal prescriptions, do you have herbal farm, where do you collect medicinal herbs, method of preservation before sale, any information of medicinal plants that are becoming rare, any conservation approaches known, year of experience in the trade and cost of services rendered.

RESULTS

Table 1 shows a summary of names of some medicinal plants, their families, parts that are used, their local names and medicinal importance.

It was reported that plant parts like roots, bark, leaves and flowers are usually collected from the forest, around the neighbourhood, along road sides and many other places. However, it was established that most of the medicinal plants brought to the markets were randomly collected in the wild and bushes from Lagos environs and adjacent states. These plant parts are preserved by cutting them into smaller pieces and then sun-dried or kept in the ceiling of thatched houses, hung in the kitchen or fire places where they are exposed to constant heat that dries them up in order to reduce moisture content. Some are ground into powder and preserved for future use. As regards conservation, most of the herb sellers and practitioners have no idea about the threat levels of most of the medicinal plants due to their low literacy level. When asked if they noticed any scarcity in some particular plants, many of them responded that the shortage is due to seasonal changes. None of them have personally monitored medicinal plant farms where medicinal plants are cultivated.

The collection method was reported in all markets to be hygienic in that well kept harvesting hatchets are used and transportation of the herbs is done almost immediately to prevent nutrient degradation.

From the responses to the questionnaire, it was provided that medicinal preparations offered for sale are made by infusion, decoction, tincture, macerations, poultices, concoction, powder and pastes. Treatment recipes for some of the common ailments which affect people in the cosmopolitan Lagos are presented below:

1. HYPERTENSION

(a) Leaves of *Persea americana* are made into shreds, dried and taken as infusion.

(b) Leaves of *Senecio biafrae* added to fermented seeds of *Parkia biglobosa* are used to prepare soup which is eaten. Leaves of *Talinum triangulare* or *Basella alba* may also be used.

(c) Kola nut's mistletoe mixed with honey is also effective.

2. DYSENTERY

(a) Decoction of the leaves of *Grewia flavescence* is made and drunk.

(b) Leaves of *Parquentina nigrescens*, *Jatropha gossypifolia*, *Pergularia daemia*, *Ocimum gratissimum* and *Momordica charantia* are all powdered together and taken with cold pap, or as decoction.

3. LOW SPERM COUNT AND WEAK ERECTION

(a) Powdered *Piper guineensis* and extract from 10 big onions are poured into honey and boiled between 5-10

minutes. A cup to be taken in the morning and at night.

(b) *Manihot esculenta* root, *Dioscorea sp.* tuber, *Garcinia cola* seed, *Cola nitida* cotyledon, dried *Zea mays*, *Cnetis ferruginea*, seeds of *Mucuna sloanei*, unripe *Musa parasidiaca* and *Piper guineensis* are all ground together with sugar, and taken with water or cold pap.

(c) The same plants as the foregoing in addition with *Klainedoxa gabonenesis*, sugar and pure bee-honey are mixed together. A spoonful to be taken like that or with cold pap.

4. COATED TONGUE

(a) Bark of *Khaya ivorensis*, bark of *Pycnanthus angolensis*, bark of *Hymenocardia acida*, bark of *Bridelia ferruginea*, bark and root of *Rauvolfia vomitoria*, bark of *Alstonia boonei*, twigs of *Citrus medica*, bark of *Enantia chlorantha*, bark of *Melicia excelsa* are all cooked and the decoction to be taken.

(b) *Costus afer*, bark of *Khaya grandifoliola*, bark of *Bridelia*, *ferruginea*, fruit of *Alchornea cordifolia*, bark of *Bridelia micrantha*, bark of *Pycnanthus angolensis*, sulphur, and lime water all poured into a container. One tablespoon of the extract to be taken before breakfast.

5. PILES

12 seeds of *Croton penduliflorus* and 7 cubes of sugar are ground and poured into bottle containing kernel oil (30cl), then left for 7 days, after which the first dose of two tablespoonfuls will be taken. Later, one spoonful every morning is to be taken before breakfast. The drug is to be taken at four days interval.

6. MENSTRUAL DISORDER

Water or alcohol extract of the leaves of *Dalbergiella welwitschii* mixed with potash is to be taken for 3 days, morning and evening.

7. LEUCORRHOEA (VAGINAL DISCHARGE)

(a) Root of *Glyphea brevis*, root and leaves of *Senna podocarpa*, *Senna alata*, *Allium ascalonicum* and potash are put together into a container, and hot water poured on the mixture. The recipe is left till the next day. One glass cup to be taken every morning before breakfast for 3 days. The preparation is also suitable for seminal discharge in men.

(b) Root of *Croton zambesicus*, 3 seeds of *Garcinia cola*, *Acacia nilotica* leaves, 3 seeds of *Aframomum melegueta*, leaves of *Mimosa pudica* and small quantity of potash are ground together, and taken with cold pap.

8. FEVERS

A decoction of the root of Sphenocentrum jollyanum, *Zingiber officinale*, bark of *Khaya grandifoliola*, root and bark of *Rauvolfia vomitoria*, bark of *Alstomia congensis*, root and bark of *Senna sceptabilis*, root of *Zanthoxylum xanthoxyloides*, leaves of *Ocimum basilicum* and sp is taken for fever.

Fig 1. Summary of the medicinal plants that are traded in Lagos.

S/N	Local name	Botanical name	Family	Part used	Medicinal use(s)
1	Ori (Y)	*Butryospermum paradoxum*	Sapotaceae	Seeds	Nasal decongestion, catarrh, hypertension, diuretic, antihelmintic.
2	Ayu (Y)	*Allium sativum*	Liliaceae	Bulb	Fever, cough, asthma, antibiotic, diuretic, malaria, hypertension

KEY: Y = Yoruba

3	Ata-wewe (Y)	*Capsicum frutescens*	Solanaceae	Fruits, seed	Fever, dysentery, malaria, carminative, stimulant
4	Yanrin (Y)	*Lactuca capensis*	Compositae	Leaves	Diuretic, constipation
5	Abamoda (Y)	*Bryophyllum pinnatum*	Crassulaceae	Leaves, roots, leaf sap	Cough, diarrhoea, dysentery, wounds, fever, sedative, diuretic, epilepsy, antifungal, antimicrobial, anticancer
6	Jinja, Atale (Y)	*Zingiber officinale*	Zingiberaceae	Rhizome	Cold, cough, asthma, stimulant, rheumatism, piles, hepatitis, liver diseases, obesity, typhoid fever, malaria, digestive disorders
7	Esuru (Y)	*Dioscorea dumetorum*	Dioscoreaceae	Tuber, leaves	Colic, analgesic, skin diseases, psychic troubles, malaria, antibilharzial.
8	Awopa (Y)	*Enantia chloranta*	Annonaceae	Bark	Typhoid fever, malaria, jaundice, ulcer, rickettsia, haemostatic, infective hepatitis
9	Oganwo (Y)	*Khaya grandifoliola* *K. senegalensis* *K. ivorensis*	Meliaceae	Stem, root, bark	Treatment of convulsion, fever,threatened abortion, rheumatism and dermatomycosis. Treatment of malaria and anaemia Treatment of malaria, jaundice,anaemia, arthritis; antihelmintic
10	Akerejupon (Y)	*Sphenocentrum jollyanum*	Menispermaceae	Roots, fruits	Treatment of high blood pressure with leaves of *Commiphora africana;* cough, wounds, fever, jaundice, breast swelling related to menstrual cycle, malaria; aphrodisiac.
11	Ifan, Ifon (Y)	*Olax subscorpioidea*	Olacaceae	Roots, leaves, stem-bark,	Yellow fever,jaundice, guinea worm, toothache, venereal diseases, mental

				twigs	disorders
12	Aidan, Aridan (Y)	*Tetrapleura tetraptera*	Leguminosae	Bark, pod	Convulsions, fever, cough, asthma, insomnia, poison antidote, fractured bones, gonorrhoea, rheumatism, infertility, bilharzia.
13	Akika (Y)	*Lecaniodiscus cupanioides*	Sapindaceae	Leaves, roots, young shoots, seeds, stem-bark	Fever, burns, liver abscesses, jaundice, cough, malaria; purgative,aphrodidiac
14	Efirin-gogoro, Efirin-oko (Y)	*Lippia multiflora*	Verbenaceae	Whole plant	Malaria, hypertension, cough, jaundice, sleepimg sickness; antipyretic.
15	Botuje, Lapalapa (Y)	*Jatropha curcas*	Euphorbiaceae	Seed, leaves, stem, roots, sap.	Ringworm, eczema, scabies, fever, guineaworm, herpes, rectal eczema, black tongue, whitlow, impotence, irregular menses, convulsion small pox; colic
16	Botuje pupa (Y)	*Jatropha gossypifolia*	Euphorbiaceae	Stem latex	Ringworm, ascariasis, antitumor, malaria, dysentery, dysmenrrhoea.
17	Ogege (Y)	*Jatropha multifida*	Euphorbiaceae	Sap	Coated tongue
18	Kooko-oba. (Y)	*Cymbopogon citratus*	Poaceae	Leaves, root	With *Lippia* to treat malaria; contains highly valued essential oil; malaria, cough,sprains, lumbago, diuretic diaphoretic.

19	Apepo, Agbelosun(Y)	*Pterocarpus erinaceus*	Leguminosae	Leaves, stem-bark	Insomnia, dermatomycosis, breast cancer fever, dysentery, diarrhoea
20	Osun (Y)	*Pterocarpus osun*	Leguminosae	Root, stem-bark	Asthma, dermatomycosis, candidiasis; antipyretic
21	Gbengbe(Y)	*Pterocarpus santalinioides*	Leguminosae	Bark	Skin diseases; antipyretic, astringent
22	Apabida pupa (Y)	*Catharanthus roseus*	Apocynaceae	Leaves, whole plant	Diabetes, hypertension, dysentery, menorrhagia; antileukemic, antitumor.
23	Ibepe (Y)	*Carica papaya*	Caricaceae	Leaves, fruits, seeds	With the bark of *Mangifera indica* to cure malaria; gonorrhoea, syphilis, amoebic dysentery, diabetes, mental disorder, convulsion; papain as meat tendirizer and as digester in breweries.
24	Dasa (Y)	*Dioclea secandens*	Leguminosae		Used to reduce high body temperature.
25	Agbarin, Epe, Arin (Y)	*Dioclea reflexa*	Leguminosae	Seed	Asthma, head lice, dandruff, stimulant
26	Laali, Lali (Y)	*Lawsonia inermis*	Lythraceae	Leaves, flower, bark	Spermatorrhoea, jaundice, gonorrhoea, leucorrhoea, ulcer, malaria, menorrhagia, astringent.
27	Epin (Y)	*Ficus exasperata*	Moraceae	Leaves, bark, root, seeds	Hypertension, scabies, stomach disorders, gonorrhoea, urinary ailments, jaundice; arbotifacient, antipyretic
28	Ipin (Y)	*Ficus asperifolia*	Moraceae	Leaves, root	Wounds,cough.
29	Opoto (Y)	*Ficus capensis*	Moraceae	Leaf, stem, fruit, root	Dysentery, oedema, leprosy,epilepsy, rickets, infertility, gonorrhoea, respiratory disorders; emollient,

					astringent; increases lactation.
30	Asoro (Y)	*Ficus elegans*	Moraceae	Leaves	Diarrhoea, piles, stomachache, constipation, craw-craw
31	Odan-afomo	*Ficus mucuso*	Moraceae	Bark of stem	Insomnia
32	Odan-abaa(Y)	*Ficus thoningii*	Moraceae	Bark	Wounds, fever, dysentery
33	Ogunro (Y)	*Ficus vallis-choudae*	Moraceae	Leaves, stem, latex	Jaundice, gastro-intestinal disorders, skin diseases; antihelmintic, astringent.
34	Ewuro (Y)	*Vernonia amygdalina*	Asteraceae	Leaves, stem, root	Measles, stomachache, ringworm, toothache, gingivitis, pneumonia, malaria, diabetes.
35	Eyin-olobe	*Phyllanthus amarus*	Euphorbiaceae	Whole plant	Fever, ringworm, gonorrhoea, diabetes.
36	Werepe (Y)	*Mucuna sloanei*	Leguminosae	Seeds, root	Haemorrhoids, skin diseases; diuretic
37	Ewe-ina, Yerepe (Y)	*Mucuna pruriens*	Leguminosae	Hairs on the pod	Intestinal worms, genito-urinary problems
38	Ahun (Y)	*Alstonia congensis*	Apocynaceae	Bark	Malaria, toothache; astringent
39	Mangoro (Y)	*Mangifera indica*	Anacardiaceae	Leaves, stem-bark, root	Malaria, diarrhoea, diabetes, hypertension, haemorrage, insomnia, insanity, asthma, cough; astringent, antihelmintic, emmenagogue.
40	Egbesi (Y)	*Nauclea latifolia*	Rubiaceae	Inner bark, stem, sap, roots, fruits, root-bark	Cough, febrile condition, thrush, jaundice, pile, measles, sore, stomach disorders, menstrual disorders; emetic.
41	Poroporo	*Sorghum bicolor*	Poaceae	Leaves,	Malaria, fever, blood

	okababa (Y)			whole plant, grains	tonic
42	Aidantoro (Y)	*Senna fistula*	Leguminosae	Pods, leaves	Diabetes, liver disorders; purgative, astringent; with Madunmaro +H_2O to cure pile.
43	Erun obo, Olu-obo(Y)	*Erythophleum suaveolens*	Leguminosae	Stem-bark, leaves	Chickenpox, gangrenous sores, snake bites, filarial worms, skin diseases, wounds, HBP; astringent.
44	Efirin (Y)	*Ocimum gratissimum*	Labiatae	Leaves, whole plant	Cough, diarrhoea, convulsion, fever,cold, bronchitis, diabetes, pile, antimicrobial, antibacterial, antihelmintic,insect repellant; colic.
45	Ugwu (I)	*Telfaria occidentalis*	Cucurbitaceae	Leaves	Convulsion, gastro-intestinal disorders, blood tonic, anaemia.
46	Orin ata (Y)	*Zanthoxylum xanthoxyloides*	Rutaceae	Bark, root	Sickle cell anaemia, venereal diseases, cough, tuberculosis, cancers, urinary disorders, arthritis, gonorrhoea
47	Jiwini, Ewe larapupa (Y)	*Acalypha wilkesiana*	Euphorbiaceae	Leaves, twigs	Skin rashes, flatulence, antimicrobial, constipation.
48	Osepotu, Esoketu(Y)	*Sida acuta*	Malvaceae	Leaves, roots	Malaria, ulcer, intestinal worms, analgesic, astringent, antipyretic, boil.
49	Iso-obo (Y)	*Sida cordifolia*	Malvaceae	Leaves, root, seeds	Spermatorrhoea, uro-genital disorders, gonorrhoea, piles, rheumatism, hay fever, asthma.
50	Eesinle (Y)	*Sida pilosa*	Malvaceae	Leaves	Diarrhoea, cuts, wounds
51	Iseketu pupa	*Sida rhombifolia*	Malvaceae	Leaves	Diarrhoea, wound;

					emollient
52	Ewe moi-moi (Y)	*Thaumatococcus danielli*	Marantaceae	Fruits	Diabetes; emetic
53	Dongoyaro(H)	*Azadirachta indica*	Meliaceae	Leaves, stem-bark, fruits	Malaria, jaundice, syphilis, eczema, ringworm, sorethroat, emethic, laxative.
54	Ahon-erin (Y)	*Aloe vera*	Liliaceae	Leaf juice	Purgative, guineaworm, skin diseases, wounds, diabetes, amenorrhoea, immunity.
55	Eti-erin, Ida-egun, Ida-orisa (Y)	*Aloe barteri*	Liliaceae	Leaves	Ringworm, amenorrhoea, cough, skin infection, pile; astringent, aphrodisiac, antihelmintic.
56	Orogbo (Y)	*Garcinia cola*	Guttiferae	Seeds, root, stem-bark, fruits	Dysentery, bronchitis, cough, fever, toothache, throat and respiratory ailments, liver disorders, headache, anticancer.
57	Imi-esu (Y)	*Ageratum conyzoides*	Asteraceae	Whole plant, leaves, roots.	Wounds, ulcer, craw-craw, digestive disturbance, diarrhoea, skin diseases, gonorrhoea, eye wash; emetic.
58	Ila (Y)	*Abelmoschus esculentus*	Malvaceae	Fruit, seeds	Fevers, gonorrhoea, dysentery, catarrhal infections; emollient, antispasmodic, tonic
59	Oju-ologbo (Y)	*Abrus precatorius*	Leguminosae	Root, leaves, seeds.	Cold, cough, convulsion, rheumatism, conjuctivitis, contraceptive, aphrodisiac, ulcer, anaemia
60	Furu (Y)	*Abutilon mauritianum*	Malvaceae	Leaves, root	Diarrhoea, gonorrhoea, cough, pile; antipyretic
61	Ihun, Ewon adele	*Acacia ataxacantha*	Mimosaceae	Young leaves	Dysentery, backache
62	Baani, Booni (Y)	*Acacia nilotica*	Mimosaceae	Fruits, bark,	Skin diseases,fungal infections, insomnia;

				exudate	emollient.
63	Dagunro (Y)	*Acanthospermum hispidum*	Asteraceae	Leaves, whole plant	Yellow fever, tuberculosis, cough, rheumatism, migraine; purgative.
64	Ahon-ekun, Irunmu arugbo	*Acanthus montanus*	Acanthaceae	Stem-twig, leaves, roots.	Syphilis, cough, urethral discharge, boils, anaemia; purgative, emetic, antihelmintic.
65	Ose (Y)	*Adansonia digitata*	Bombacaceae	Leaves, fruit pulp, bark.	Malaria, asthma, diarrhoea, kidney and bladder diseases, caries, antimicrobial, prophylactic, skin diseases.
66	Efun-ile (Y)	*Aerva lanata*	Amaranthaceae	Whole plants	Ulcer, wounds, snake bite, kidney and bladder stones sore; diuretic, purgative, antihelmintic.
67	Atare (Y)	*Aframomum melegueta*	Zingiberaceae	Leaves, seeds	Stimulant, smallpox, chickenpox, wounds, cough, anaemia, rheumatism, measles, malaria, toothache.
68	Agbari etu (Y)	*Alafia barteri*	Apocynaceae	Roots, leaves	Sickle cell anaemia, rheumatic pains, toothache, eye infections.
69	Alubosa elewe (Y)	*Allium ascalonicum*	Liliaceae	Leaves, bulb	Convulsion, dysentery.
70	Ipa (Y)	*Alchornea cordifolia*	Euphorbiaceae	Leaves, stem-bark, twig.	Fever, rheumatism, antimicrobial, diuretic, purgative, toothache, cough, gonorrhoea.
71	Eko-omode (Y)	*Caesalpinia pulcherima*	Leguminosae	Bark, leaves, seeds	Purgative, emollient, abortifacient, emmenagogue.

72	Apa-igbo (Y)	*Afzelia africana*	Leguminosae	Root, leaves, stem bark, seeds	Gonorrhoea, stomach disorders, hernia, lumbago, febrifuge, antiemetic.
73	Reku-reku (Y)	*Alternanthera sessilis*	Amaranthaceae	Whole plant, leaves	Astringent, antibacterial, boil, headache, snake bite antidote.
74	Kasu (Y)	*Anacardium occidentale*	Anacardiaceae	Bark, leaf, fruit	Malaria, elephantiasis, leprosy, ringworms, scurvy, diabetes, warts, typhoid fever, caries; antihelmintic
75	Sapo, Shapo (Y)	*Anthocleista djalonensis* *Anthocleista liebrechtsiana*	Leguminosae	Bark, leaves	Skin diseases- rashes and eczema, diabetes, impotence, abdominal pain; antipyretic, purgative Skin infection; purgative, antimicrobial
76	Epa (Y)	*Arachis hypogea*	Leguminosae	Nuts	Antimicrobial, insomnia.
77	Oparun (Y)	*Bambusa vulgaris*	Poaceae	Leaves, young shoot	Gonorrhoea, abortifacient, antihelmintic, emmenagogue.
78	Osun, Irosun (Y)	*Baphia nitida*	Papilionaceae	Leaves, bark, root, twig.	Constipation, skin diseases, venereal diseases, ringworm, enema, flatulence, smallpox.
79	Eku, Eso roro (Y)	*Allanblackia floribunda*	Guttiferae	Root, leaves, stem-bark, fruit	Malaria, dysentery, toothache, chickenpox, smallpox, measles.
80	Amuje wewe (Y)	*Brysocarpus coccineus*	Connaraceae	Root, leaves	Jaundice, pile, gonorrhoea, venereal diseases, impotence, antitumor.

81	Ododo-Maria	*Calendula officinalis*	Asteraceae	Leaves, root	Ulcer, astringent
82	Bomubomu (Y)	*Calotropis procera*	Asclepiadaceae	Leaves, root, bark, latex	Diarrhoea, dysentery, elephantiasis, leprosy, chronic eczema, ringworm, cough, diaphoretic, emetic, asthma, abortifacient, convulsion, antipyretic.
83	Paapo, Origbo (Y)	*Canarium schweinfurthii*	Burseraceae	Bark.	Black tongue, round worm, gonorrhoea, stomach disorder.
84	Sese-nla (Y)	*Canavalia ensiformis*	Leguminosae	Seed	Antibiotic, antiseptic
85	Abo-oganwo (Y)	*Carapa procera*	Meliaceae	Bark, seed, leaves	Purgative, ringworms, boils; carminative, malaria.
86	Shaworo (Y)	*Cardiospermum halicacabum*	Sapindaceae	Leaves, root	Skin eruption, piles, rheumatism, emetic, syphilitic sores, amenorrhoea.
87	Ponju-owiwi (Y)	*Celastrus indica*	Celastraceae	Root, leaves, twigs	Asthma, malaria; antihelmintic, antimicrobial
88	Araba (Y)	*Ceiba petandra*	Bombacaceae	Flowers, leaves, bark exudates.	Diabetes, asthma, gonorrhoea, menorrhagia; emollient, emetic.
89	Ewe jokoje (Y)	*Cissampelos owariensis*	Menispermaceae	Root, whole plant	Lung diseases, skin diseases; emmenagogue, antipyretic, diuretic, blood tonic.
90	Akintola, Awolowo (Y)	*Chromolaena odorata*	Asteraceae	Leaves, stem, twigs	Antimicrobial, dysentery, headache, fever, malaria, toothache, haemostatic, skin diseases.
91	Awusa, Asala	*Tetracarpidium*	Euphorbiaceae	Leaves,	Masticatory, giddiness,

	(Y)	*conophorum*		fruit, bark.	thrush, syphilis, dysentery, toothache, snake bite antidote.
92	Eriro-Ijebu (Y)	*Vernonia colorata*	Asteraceae	Root, leaves	Antipyretic, antihelmintic, astringent; skin diseases, gonorrhoea, anaemia, poison antidote.
93	Eeru, Erunje (Y)	*Xylopia aethiopica*	Annonaceae	Fruit, bark, leaves, seeds.	Stomach ache, cough, neuralgia, mental disorder, amenorrhoea, bronchitis; purgative, carminative.
94	Igbalode, Muwagun (Y)	*Tridax procumbens*	Asteraceae	Whole plant	Antipyretic, haemostatic; backache, stomach ache
95	Ewe-epo (Y)	*Waltheria indica*	Sterculiaceae	Whole plant, root	Cough, fever, external haemorrhage, dysentery, toothache, malaria, eye drop.
96	Oori-nla (Y)	*Vitex doniana*	Verbenaceae	Leaves, root, stem-bark.	Cough, stomach ache, ringworm, fever, inflammatory swelling of joints, rheumatism, bad breath, diarrhoea, catarrh.
97	Eruju (Y)	*Uvaria chamae*	Annonaceae	Root, leaves	Jaundice, yellow fever, sores; febrifuge, purgative.
98	Afomo (Y)	*Viscum album*	Loranthaceae	Whole plant	All purpose herb for cancer, anaemia, HBP, diabetes, stroke, hysteria, amenorrhoea, dysmenorrhoea; emetic.
99	Gbongbose,	*Uvaria afzelii*	Annonaceae	Bark, leaves	Infections of liver, kidney and bladder;

	Anikan wogba-arun (Y)				fever, cough, skin diseases; purgative.
100	Ilasa-agborin, Ilasa-omode (Y)	*Urena lobata*	Malvaceae	Whole plant leaves	Dysentery; emollient, expectorant
101	Alupayida (Y)	*Uraria picta*	Leguminosae	Leaves	Snake bite antidote, repositioning foetus intra-uterine; aphrodisiac.
102	Ako-dodo (Y)	*Voacanga africana*	Apocynaceae	Latex, stem, root bark.	Fever, toothache, cardiac tonic, sores, carious tooth, hypertension, improves mental alertness.
103	Egun arugbo, Ekan-ekun (Y)	*Argemone mexicana*	Papaveraceae	Whole plant, latex, seed, roots.	Jaundice, gonorrhoea, skin diseases, diuretic, blennorrhoea, abscesses; taeniacide
104	Berefurutu	*Artocarpus altilis*	Moraceae	Root, fruit.	Fever, astringent, sedative
105	Etiponla, Olowojeja (Y)	*Boerhaavia diffusa*	Nyctaginaceae	Whole herb.	Skin diseases, smallpox, jaundice, gonorrhoea, asthma, cough, yaws, scabies; diuretic, antipyretic.
106	Irawo ile (Y)	*Borreria verticiliata*	Rubiaceae	Leaves, root, whole plant.	Gonorrhoea, skin diseases, dysentery; antibilharzia, antileprosy, abortifacient, diuretic.
107	Osunsun (Y)	*Carpolobia lutea*	Polygalaceae	Leaves,	Rheumatism toothache;

				bark.	aphrodisiac.
108	Egusi-baara (Y)	*Citrullus colocynthis*	Cucurbitaceae	Seeds, whole plant, root, fruit	Antimicrobial, purgative, antihelmintic, contraceptive; head lice bladder stone
109	Osan (Y)	*Citrus aurantium*	Rutaceae	Oil, root, juice	Cough, sore throat, stomach ache, malaria, typhoid fever; carminative, antihelmintic.
110	Yunyun (Y)	*Aspilia africana*	Asteraceae	Leaves, flowers	Haemostatic, cleaning sores, corneal opacities, stomach disorders, tuberculosis, nervous disorders, guinea worm, gonorrhoea, skin rashes.

language, H = Hausa, I = Igbo. Source: Local markets in Lagos state, TMPs and traditional medicine users in Lagos.

DISCUSSION AND RECOMMENDATIONS

It is apparent that the use of herbal medicine in Lagos State is on the increase. The ubiquitous presence of herb and herbal products marketing both in the conventional and unconventional way of selling drugs as well as the sexes and number of people that are involved in the trade is a confirmation of this assertion. Not only this, year of expertise, standard of living and material achievements pointed to the fact that the trade is lucrative in Lagos. Moreover, patronage and usage of traditional medicine cut across the social strata of Lagosians. Daily health issues of Lagos state dwellers are taken care of by traditional medicine. It is well used in Lagos as an alternative method of health care delivery. It is opted for as a result of its cost effectiveness, easy access and potency. Recipes for the treatment of common ailments which are reported almost on daily basis in Lagos included hypertension, dysentery, low sperm count and weak erection, coated tongue, pile, menstrual disorder, leucorrhoea and fevers; these recipes reported in the study are reproducible. The TMPs remain in the business because of cheap source of raw materials, ease of preparation, overwhelming patronage, government recognition of their practices, drug effectiveness report from users and due to the fact that it is the practitioners' main source of livelihood. However, a more serious government intervention is required to uplift the quality status of the traditional medicine practice in the country. The frantic efforts of Nigeria Natural Medicine Development Agency and Lagos State Traditional Medicine Board should be praised in ensuring safe delivery of medicinal preparation in the country. It was extremely difficult to obtain information from the practitioners; to combat this, the patent rights of TMPs and herb sellers should be protected by government. Conservation of these plants is paramount in order to avoid extinction through education, establishment of medicinal plant farms, sustainable harvesting approaches and setting aside of thick forest in the local communities as special forest.

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