

Ethno- Medical Uses of Plants in the Treatment of Various Skin Diseases in Ovia North East, Edo State, Nigeria

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Abstract: This study was investigated in 9 rural communities in Ovia North East Local Government Area of Edo State. The investigation included names and plant parts used, ailments cured, preparation and administration of these herbs. Facts were obtained with the aid of well structured questionnaires and interviews of old and experienced rural people as well as herbalists. The use of traditional medicine was observed to be widespread and prevalent in most area studied over orthodox medicines. An inventory of 41 plant species from 29 families for which 13 were trees, 11 shrubs and 17 herbaceous plants were observed, an indication of high plant biodiversity. There were 57 medicinal plant uses out of which leaves, stem bark, seeds/roots, fruits, flowers/buds were used in 35, 10, 7, 3 and 2 cases respectively. The findings are documented.

Key words: Ethnobotany, medicinal plants, skin diseases, herbalists, traditional medicines

INTRODUCTION

Medicinal plants in Nigeria were considered by several researchers Gbile^[9] and Iyamabo^[13] to form an important component of the natural wealth of the country. The tropical rainforest of which Nigeria is a part has been described by Sofowora^[24] as a reservoir of phytomedicines. Many of these plants as explained by Gill^[10] and Iwu *et al*^[14] contained substances that can be used for therapeutic purposes if used by man. Ransome-Kuti^[23] estimated that the ratio of Doctors to patients in Nigeria was 1:200,000. and hence the need for rural areas in particular to use medicinal plants.

These plants have traditionally been used by Nigerians because they are natural products, environmentally friendly, easily available, cheap and curative than many sub standard orthodox medicines imported into the country today. Sometimes these conventional medications have been confirmed by Murray^[19] to have toxic effects on humans and according to Maingi *et. al.*^[18] there is the development of resistance by man and animals to some of these drugs by target parasites as well as high cost of the drugs. Chema and Ward^[7] reiterated that with these misgivings on some orthodox medicines, herbal remedies have become a reasonable alternative. As recorded by Kafaru^[15] these ancient indigenous practices were discovered by a series of "trial and error" which then could not be proven by scientific theories though but the results have been beneficial and

efficient compared to conventional modern medicines.

In his contribution Eisenberg *et. al*^[8] estimated that in United States of America. the total number of visits to unconventional healers in 1988 was 425m compared to 388m visits to primary health care physicians. Results revealed by Iwu *et al*^[14] indicated that these plant resources are scattered and need to be consolidated. Okafor^[20] also stressed that most indigenous plants are found in the wild and semi-wild habitats and are presently suffering from genetic erosion due to large scale deforestation activities of the Nigerian people.

This study was aimed at identifying some medicinal plants used in treating skin diseases by healers in Ovia North East Local Government Area of Edo State. According to Adodo^[1] many of us do not know how important the skin is apart from it being a protective outer cloak for the body. This investigation will assist in making information available on how these drugs obtained from medicinal plants are prepared and administered. Also relevant is the documentation of the local and common names for easy communication and if and where possible to preserve these plants in the University's herbarium.

MATERIALS AND METHODS

The study was carried out in nine rural communities of Ovia North East Local Government Area,. Edo State, Nigeria. Edo state is located within

Table 1: Distribution of sampling intensity of the medicinal plants in the area of study.

Area of Study Rural Areas/peri urban	Number of identified Herbalists	54% Sampling Intensity Ugbowo
Ugbowo	11	6
Isiohor	18	10
Evbomore	24	13
Iguosa	20	11
Oluku	16	9
Utekon	27	15
Iyowa	23	12
Evboneka	19	10
NIFOR	16	9
Total	174	95

Source: Field survey:2005.

latitude 5° 45' and 7° 8' North and longitude 5° 4' and 6° 52' East. The climate is tropical and the vegetation is lowland rainforest with a mean annual rainfall of 2300mm. The communities are University of Benin (Uniben) Ugbowo, Isiohor, Evbomore, Iguosa, Oluku, Utekon, Iyowa, Evboneka and NIFOR (Table 1 and figure 1 map) The University of Benin is located in the Ugbowo vicinity. The areas selected had a lot of farmers and home gardeners who are self employed. The people complained that during the course of their work that dermatitis was mainly a problem.

Sampling Method: Prior to the survey of the locations, random sampling was used of which 174 participants were identified amongst whom were old, experienced people including male farmers, women and herbalists. The number obtained was large for accurate information and so random sampling intensity was used to obtain 54% of the total for ease of administration and so questions were given to 95 recipients (Table 1) Observations were also made during guided tours and transect walks.

An inventory was taken and oral interviews were conducted in response to well structured questionnaires designed on identification and documentation of plants and their uses, local names for ease of communication, ailments cured, preparation and administration of the herbs, etc. In this process the medicinal plant characteristics were also discussed for better knowledge of the plants involved.

Species were scientifically identified with the aid of The useful plants of West tropical Africa^[6], Nigerian Weeds^[4] Nigeria Trees^[16] and Medicinal plants of Nigeria booklet^[3]. Analysis of data was done and

indigenous knowledge was documented. In coming data were carefully scrutinized before collection. The data from the nine communities were collated using Hannagan's^[11] method of coding in processing the questionnaires. The coded information was summarized in form of tables.

RESULTS AND DISCUSSIONS

Results: In the survey, 41 plant species from 29 families were identified. A total of 57 commonly used prescriptions for skin diseases were noted. Mixtures of plants were used in some cases. Several medicinal plant parts were used in herbal preparations such as leaves, stem and barks, fruits, seeds and roots Of all these, the leaf was found to be used in about 70-75% of the cases..

Table 2 gives a synopsis of medicinal plants and their uses as observed in this study.

The botanical names are arranged alphabetically. These plants include some wild and uncultivated ones (*Xylopi aethopica* (Guinea pepper) *Plukenetia conophorum* (African walnut), *Monodora myristica*, (African nutmeg) *Fromomium melequenta* (Alligator pepper) and some semi-wild plants such as *Dacryodis edulis*, etc. They also include ornamental plants like *Lawsonia inermis* (Dye) and herbs.

The parts of plants used for medicinal preparations vary from leaves, stem barks, seeds, roots, fruits, and flowers respectively. These are found in Table 3.

The leaves were observed to be top priority as used in 35 medicinal preparations followed by stem bark 10, seeds and roots 7, fruits 3 and flower buds 2. The leaf is therefore the most efficacious part used in medicinal preparations.



Fig 1: A map of Edo state showing study areas.

Table 2: Ethnomedical uses of Plants for skin diseases in Ovia North East Local Government Area, Edo State

Botanical Names	Family	Common Name	Local Name	Parts Used	Major Cure	Preparation & Administration
<i>Afromomium melegueta</i>	<i>Zingerberaceae</i>	Alligator pepper	Ehiendo (Bini) Atare (Yoruba)	Leaves	Small pox and chicken box Sores	1 leaf decoction rubbed on fungal infection. 2 Boil leaves and use in bathing.
<i>Acalypha wilkesiana</i>	<i>Euphorbiaceae</i>	Copper leaf		Leaves		1.The decoction of leaves used to rub small pox and chicken pox. 2.Powdered seeds added to Vaseline and rubbed on skin rashes,
<i>Ageratum conyzoides</i>	<i>Compositae</i>	Goat weed	Imi-esu (Yoruba)	leaves	Wounds, rashes, ulcers	1.Ground leaves, and apply to affected Wound. 2Decoction of leaves with water apply to to rashes.
<i>Allium cepa</i>	<i>Liliaceae</i>	Onion	Alubarha (Bini) Yabasa (Ibo) Alubosa (Yoruba)	Bulb	Rashes and scorpion bites.	1Crushed onion juice applied to rashes. 2. Onion juice rubbed on the stings
<i>Aloe bateri</i>	<i>Liliaceae</i>	Aloe vera		Leaves	Boils and dandruff	1.Use leaf gel as a poultice on boils 2.Squeeze leaves and rub gel on scalp.

Table 2: Continued

<i>Alstonia boonei</i>	<i>Apocynaceae</i>	Cam wood	Ukhu (Bini) Awun (Yoruba)	Stem bark	Snake bite and arrow poison.	The infusion of the bark alone is drunk As a remedy for these.
<i>Amaranthus spinosus</i>	<i>Amaranthaceae</i>	Prickly amaranthus	Inine (ibo) Tete elegun (Yoruba)	Whole plant	Sores, andeyewash	1. Ashes from burnt plant good for sores 2. Juice from the plant used as eye wash
<i>Anarcidium occidentale</i>	<i>Anarcardiaceae</i>	Cashew	Ekashu (Edo)	mature leaves	Body Swellings in rheumatism and arthritis	Slice mature leaves, infuse in local gin In a bottle and rub swollen rheumatic or arthritis parts.
<i>Bryophyllum pinnatum</i>	<i>Crassulaceae</i>	Airplant or resurrection plant	Idan wesin (Edo)	Leaves	Wounds.	Leaves are slightly warmed in fire and applied to wounds.
<i>Capsicum frutescense</i>	<i>Solanaceae</i>	Hot pepper	Ehien (Bini) Atarodo (Yoruba)	Ripe fruits /seeds	Wounds Dog bites	Powdered mixed with palm oil and applied to cuts and wounds.
<i>Caladium bicolor</i>	<i>Araceae</i>	Jesus blood	Edeu mumuo (Ibo)	Leaves	Boils	Fire the rhizome applied locally treat boils and abscesses.
<i>Cassia alata</i>	<i>Caesalpinia ceae</i>	Ringworm plant,.	Akoria ovbi ore (Bini) Asurun oyibo (Yoruba)	Leaves	Eczema, Ringworm	1 Decoction of leaves and kerosene applied to eczema, ringworm etc. 2. Decoction of leaves and young shoot added to black soap to bathe.
<i>Carica papaya</i>	<i>Caricaceae</i>	Pawpaw	Uhro (Bini) Ibepel (Yoruba)	Leave	Sores	The roasted leaf pulp is placed on sores for healing.
<i>Celosia argentataeae</i>	<i>Amarantha ceae</i>	Cockscomb, quailgrass	Sokoyokoto (Yoruba) Ebe-afor (Bini)	Leaves	Rashes	1 The juice of the leaves are used for rashes. 2. Seeds ground into paste and applied
<i>Chromolaena odorata</i>	<i>Compositae</i>	Awolowo weed siam weed.	Akintola taku (Yoruba)	Leaves	Wounds and Insect stings	Squeeze leaves and put on cuts from wounds and stings.
<i>Cnestis Spp.</i>	<i>Connaraceae</i>	-	Esinsin (Yoruba)	Leaves	Rashes	Blend and mix with cam wood and black soap: rub on skin
<i>Corchorous olitorius</i>	<i>Tiliaceae</i>	Jute plant	Ebiyoyo (Bini) Ewedu (Yoruba)	seeds	Abscesses and swellings.	Paste from ground seeds used to rub on abscesses and swellings.
<i>Colocasia esculentum</i>	<i>Araceae</i>	Cocoyam	Ewiebo (Ishan)	Leaves and Roots	Snake bite and rheumatism	1. poulitice from the roots is used for snakebite. 2. Poulitice from both roots and leaves used for swellings of
<i>Dacryodes edulis</i>	<i>Burseraceae</i>	African pear	Orunmwun (Bini) Olumu (Ishan)	Bark	Swollen foot from jigger infestation.	A paste of the bark is a remedy for swollen foot (jiggers).
<i>Datura stramonium</i>	<i>Solanaceae</i>	Green thorn applr	Apikan (Yor)	Leaves, seeds	Sores and stings	The crushed leaves and seeds are mixed with palm oil and applied to severe cases of insect bites Insect bites and stings.

Table 2: Continued

<i>Ficus exasperata</i>	<i>Moraceae</i>	Sand paper plant	Amenmen (Bini) Ipin (Yoruba)	Leaves	Ringworm	Rub leaves on affected part.
<i>Heliotropium ovaliphoilum</i>	<i>Boraginaceae</i>	Cockscomb	Oriigun (Yoruba)	Leaves	wound	Rub leaves and juice on the wound of A scorpion Sting.
<i>Hibiscus rosa sinensis</i>	<i>Malvaceae</i>	Garden hibiscus	Kekeke (Yoruba) Flava (Ibo)	Flower buds	Boils	Apply paste of flower buds to boils.
<i>Justicia flava</i>	<i>Acanthaceae</i>			Leaves	Skin disease	Boil leaves and use to bathe.
<i>Kalanchoe spp</i>	<i>Crassulaceae</i>	Velvet leaf		Leaves	Sores and tumors	Freshly pound leaves used to treat sores and wounds.
<i>Lawsonia inermis</i>	<i>Lythraceae</i>	Henna, Cypress shrub	Lali (Yoruba)	Leaves	Skin tonic	The powder of the dried leaves used As a tonic astringent on the skin by checking perspiration.
<i>Mimosa pudica</i>	<i>Legumino seae</i>	Touch me not or sensitive plant	-	Leaves	Guinea worms	1. Apply juice from leaves to pically to infected parts. 2. Apply leaves topically.
<i>Monodora myristica</i>	<i>Anonaceae</i>	African nutmeg	Ikposa (Bini) Ariwo (Yoruba)	Seeds	Guinea worms	1. Seeds ground to powder and used to treat the worms. 2. Decoction of seeds is drunk
<i>Occimum gratissimum</i>	<i>Labiataceae</i>	Fever Plant	Ebe-amwokho (Bini) Effirin (Yoruba)	Leaves	Insect bites.	Crush leaves.or Squeeze fresh leavess and rub on affected parts.
<i>Peproma pellucidia</i>	<i>Piperaceae</i>	-	Reren (Yoruba)	Whole plant	Wound	Local juice applied to fresh wound.
<i>Plukenetia conophora</i>	<i>Euphorbia ceae</i>	African walnut	Okhue (Bini) Asala (Yoruba)	Fruits	Snake bite	Eat the uncooked fruit
<i>Portulaca oleraceae</i>	<i>Portulacaceae</i>		Papasan (Yor)	Whole plant	Swellings, bruises and whitlow.	The crushed plant is applied locally on swellings and affected parts.
<i>Rauwolfia vomitora</i>	<i>Apocynceae</i>	Swizzle stick or serpent wood	Akata (Bini) Asofeyje (Yoruba)	Seeds roots	Skin diseases	1. Powder root and seeds: add to soap and use
<i>Sanseveria libenica</i>	<i>Agavaceae</i>	Mother In Law's tongue, Leopard Lily.	Pasankooko (Yoruba)	Whole plant	Bad sores	1. Grind leaf in a brass container and let it be thick. Add to sores, relieves 2 Powdered roots and water. Drink for tetanus
<i>Spondia mombin</i>	<i>Anacandia ceae</i>	-	Ogheghe (Bini) Iyeye (Yoruba)	Bark Leaves	Athlete's foot	Leaf and .Bark extracts used when in fused.
<i>Talinum trianulare</i>	<i>Portulacaceae</i>	Water leaf	Ebodundun (Bini)	Leaves	Cuts, wounds and scabies.	Macerate leaves and \apply.
<i>Terminalia catapa</i>	<i>Combreta ceae</i>	Almond Tree	Ebelebo (Bini)	Bark leaves	Leprosy and scabies	1Sap from the young leaves are rubbed on affected parts. 2. Macerated leaves in palm oil on leprosy.

Table 2: Continued

<i>Vernonia amygdalina</i>	<i>Compositae</i>	Bitter leaf	Ebe-oriwuo (Bini)	Leaves Juice	Measles	Extract of leaves in native gin and rubbed on the skin.
<i>Vitex doniana</i>	<i>Verbenaceae</i>	Black plum	Oriri (Bini) Uchekon (Ibo)	Leaves Bark	Ringworm	Apply Juice of leaves on ringworm..
<i>Xylopiya aethiopica</i>	<i>Anonaceae</i>	African guinea pepper	Unien (Bini) Eeru (Yoruba)	Fruits	Rheumatism and Arthritis	1. Pound fruits and make into paste and apply. 2. Grind fruits and add to; pomade, rub on affected parts.

Table 3: Frequency of Plant Parts Used for Herbal Remedies

Plant Parts	Frequency
Leaves	35
Stem barks	10
Seeds/roots	7
Fruits	3
Flower buds	2

Discussion: The results showed that the area of study fig 1, consisted of various and incredible medicinal plants. This corroborates the findings of Olapade and Bakare^[21] who believed that the forests contained a lot of plants suitable as medicinal remedies. A mixture of plant parts from roots to leaves were used in herbal preparation but the leaves were tops in priority. This is because the use of medicinal plants, as described by Olumofin^[22] is complex as different herbalists use various combination of plants to cure different ailments. The use of herbaceous plants for herbal remedies was common as the respondents agreed that it was easier to use these as they were not only easily available for harvests but also easy to prepare by grinding in various mortars or dissolved by gin used (equivalent of alcohol). They can also be easily be cooked by boiling. Hence in Table 4 a lot of plants used were herbaceous. In case of trees, the barks or juice are extracted after decortication process.

Many plant species were observed by old informants to be disappearing due to human activities in the forest which was confirmed by Anifowoshe and Kalu^[5] in their investigations and advocated that medicinal plants should be focused for regeneration and propagation. They suggested the establishment of Home and Botanical gardens especially as the average Nigerian faces harsh economic crisis and can ill afford

expensive orthodox medicines. As recorded by Sorungbe^[20], only about 39% rural communities in Nigeria have access to modern health care services. There is therefore the need for rejuvenation of these plants to preserve their genetic diversity. As confirmed by Okafor^[12] lack of conservation measures will increase the number of endangered species resulting in gradual extinction of numerous plant taxa that are useful as herbal remedies. In his contribution, Heywood

(1992) concluded that conservationists in Nigeria must begin to address this area of genetic erosion at the genetic level which is the most neglected and least understood area of biological diversity.

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