



ETHNOMEDICINAL SURVEY OF SOME PLANTS FOUND IN KANKIYA L.G.A OF KATSINA STATE, NIGERIA

USMAN, L.U.¹, IORTSUUN, D.N.^{2*}, AND IBRAHIM, H.M.³

¹Department of Biological Sciences, Umaru Yar'Adua University, Katsina, Nigeria

²Department of Biological Sciences, ³Department of Pharmacognosy and Drug Development, Ahmadu Bello University, Zaria, Nigeria

ABSTRACT

An ethnomedicinal survey was carried out in Kankiya Local Government Area of Katsina state, Nigeria. Questionnaires were administered on sixty respondents as well as oral interview methods were employed principally on traditional medicine practitioners and herbalists. In a few cases, farmers, hunters and elderly men and women that utilise traditional medicines were also interviewed. A recent and valid nomenclature, along with the local and scientific names, plant description, and parts of the plant used were identified in the herbarium of the Department of Biological Sciences, Ahmadu Bello University Zaria. The ethnomedicinal uses of 50 one plants belonging to twenty-nine families that are used in the treatment of about 45 different ailments were recorded. The use of traditional medicine was observed to be wide spread and prevalent over orthodox medicine. This indicated that traditional medical practice is an important component of the health care delivery system in the area. There is a need to maintain ethnobotanical gardens and conservation areas for sustainable use.

Keywords: Ailments, medicinal plants, traditional medicine

***Correspondence:** amoter2013@yahoo.com

INTRODUCTION

Traditional medicine can be said to be a comprehensive knowledge system that encompasses the utilization of substances, dosages and practices based on socio-cultural norms and religious beliefs as well as witnessed experiences and observations of a specific group [1]. The practice is used in various therapies by the indigenous population all over the world. It has been documented that about 80% of the people in developing countries rely on traditional medicines for their primary health care need. This can be attributed to increased poverty, ignorance as well as unavailability of modern health facilities [2, 3].

Ethnomedicine refers to the study of traditional medical practices which is concerned with the cultural interpretation of health, diseases and illness and also addresses the health care need and healing practices. It also denotes plants, animal products and minerals used by tribal communities of a particular region or country for medicinal purposes [4, 5]. Research interest and activities in the area of ethnomedicine have increased over the years as it has made important contribution to the understanding of traditional substances, medical knowledge and practices [5].

The use of plants in ethnomedicine is one of the most successful criteria used in the pharmaceutical industry in finding new therapeutic agents for possible use in various medicines [6]. This could be attributed to the fact that medicinal plants contain curative components whose validity could be based on many traditional claims

regarding their medicinal values. They are also regarded to be relatively safer and better than synthetic drugs as they contain carbohydrate, protein, fats, vitamins and minerals believed to be naturally acceptable to the human body. They also produce diverse types of other bioactive molecules such as tannins, alkaloids, glycosides and terpenoids making them a rich source of different types of medicines [3, 7].

Although the knowledge of these plants was developed gradually as it passed from generation to generation and has laid the foundation of many health care systems all over the world, there is a particular interest in the field of ethnomedicine as palpable anxiety across the globe that with the passage of time, this traditional healing system will become extinct as old people who possess this knowledge might die without transferring this vital information to the future generation [8], thus the need for the present study.

MATERIALS AND METHODS

Study area

Kankiya (Kankia) Local Government Area (LGA) of Katsina state is at latitude 12°32'57"N and longitude 7°49'31"E on the Nigerian land mass [9]. The population of the area is about 151,434 [10] surrounded by Ingawa LGA to the east, Charanci LGA to the north, Dustin-ma LGA to the west [11].

Data collection

The data from the study area were obtained from oral interviews and administration of structured questionnaires to principally the traditional medicine practitioners, herbalists, farmers, hunters, and elderly men and women above the age of 30 years.

Plant collection and identification

Plant specimens were collected in the company of a local guide to ensure that the correct specimens were obtained. Herbarium specimens of the fresh plants collected were prepared and taken to the Herbarium unit, Department of Biological Sciences, Ahmadu Bello University, Zaria, Nigeria for proper identification and documentation.

RESULTS

A total of fifty-one species belonging to 29 families were identified as being used in the traditional health care delivery system among the populace. From these plants collected, prescriptions were recorded for treatment of approximately 45 ailments, or therapeutic indications including diabetes, hypertension, headache, haemorrhoids, asthma, diarrhea, stomach aches, jaundice, dysentery, diabetes, digestive disorders, anaemia, tuberculosis, ulcers, malaria and typhoid fever among others (Table 1).

In terms of the plant families, Fabaceae (Mimosaceae) had the highest number of occurrence (13.46%) among the plants used followed by Liliaceae, Anacardiaceae, Combretaceae, Malvaceae and Fabaceae (Papilionaceae) which had 5.77%. This was followed by one or two species from Bombacaceae, Rhamnaceae, Euphorbiaceae, Meliaceae, Moringaceae and Cucurbitaceae (Table 1).

DISCUSSION

The present study has shown that traditional medicine has a long history and is widely acceptable among the people in the area as 51 plant species were identified to be useful as medicine in the management and treatment of various ailments in the region. This supports the claim that an effective health cannot be achieved in Africa by orthodox

medicine alone unless complemented with traditional medicines [12]. This can be attributed to the poor economic situations, expensive and inadequate availability of orthodox medicines [13].

The response from the interviewers indicated that most people of the area utilize plants as an important form of drug in their traditional medicinal practices. This practice is fast growing among population of the world as these plants are found to be cheap, effective and easy to prepare. Most of the medicinal plants are administered through maceration or decoction using water or in its powdered form [14].

Medicinally, plants belonging to family Fabaceae have been reported in scientific literature for their antidiabetic and antinociceptive activities [15, 16]. Several species of the family including *Acacia* species and *Cassia* species have been reported for the traditional treatment of skin eruptions, rheumatic pains, and in treatment of syphilis, gastritis, cough, fever, ringworm, leprosy, epilepsy, dysentery, mouth ulcers and as a vermicide in other communities [17, 18]. This could justify the high occurrence of the plant family for use in the treatment of fever, diarrhea, cough and constipation in the present study.

It is also noteworthy that plants such as *Allium ascalonium* (Liliaceae) and *Citrus aurantifolia* (Rutaceae) found in the present study have been documented in previous studies to be utilized in treatments of asthma, cough and as carminative as they contain active constituents such as essential oils and triterpenoids, which are responsible for their biological activities [19-22].

Conservation of overall of them are indigenous plant species that are utilized for both medicinal and economic purposes is necessary as they remain the main source of health care delivery system, thus the need for closer collaboration between herbal medical practitioners and stakeholders in the medical practices as well as conservationists [14] so as to ensure the safe and wise use of these plant species. The medical practitioners should also be encouraged to imbibe the culture of cultivating these medicinal plants as during the present study, some of the herbalists were found complaining about the limited plant resources available for utilization.

Table 1: Summary of plants species and their parts used for medicinal purposes In Kankiya Local Government Area

S/No.	Family	Scientific names	Common/ Local names	Part used	Therapeutic uses
1	Fabaceae	<i>Acacia ataxacantha</i>	Fodder tree, Kara	Leaves	Fever, Helminthis
2	Fabaceae	<i>Acacia albida</i>	Apple ring acacia, Gawo	Leaves and bark	Fever, cough and headache
3	Fabaceae	<i>Acacia nilotica</i>	Gum Bagaruwa	Arabic, Fruits	Hemorrhage, diarrhea, and tuberculosis
4	Fabaceae	<i>Acacia sieberiana</i>	Paper bark Farar kaya	thorn, Leaves and bark	Fever and cold

5	Fabaceae	<i>Albizzia lebeck</i>	East Indian walnut, Gatsari	Seeds	Earache and leprosy
6	Fabaceae	<i>Cassia siamea</i>	Kassod tree, Malga	Leaves	Digestive and urinary disorders
7	Fabaceae	<i>Cassia tora</i>	Sickle senna, Tafasa	Leaves, seeds and roots	Eye problem, laxative and helminthic
8	Fabaceae	<i>Parkia biglobosa</i>	Locust bean tree, Dorowa	Leaves	Gastro-enteritis and hemorrhoids
9	Fabaceae	<i>Piliostigma thonningii</i>	Camel's foot, Kalgo	Leaves	Diabetes
10	Fabaceae	<i>Senna occidentalis</i>	Yaurin rai, Bazanfari, Rairai	Fruits, seeds and bark	Throat infection, fever and diarrhea
11	Fabaceae	<i>Arachis hypogea</i>	Groundnut, Gyada	Fruits and seeds	Ruptured and scaly skin
12	Liliaceae	<i>Allium cepa</i>	Bulb onions, Albasa	Leaves, seed and bulb	Bronchitis, cold and constipation
13	Liliaceae	<i>Allium sativum</i>	Garlic, Tafarnuwa	Bulb	Cold, cough, asthma, and chronic bronchitis
14	Liliaceae	<i>Allium ascalonicum</i>	White onions, Runfu	Leaves	Chest pain
15	Bombacaceae	<i>Bombax costatum</i>	Red kapok tree, Gurjiya, Kuriya	Stem bark and fruits	Constipation, yellow fever and headache
16	Bombacaceae	<i>Adansonia digitata</i>	Baobab, Kuka	Root, bark and seed	Diarrhea and hemorrhoid
17	Annonaceae	<i>Annona senegalensis</i>	Wild custard apple, Gwandar daji	Leaves	Snake bite and gastro-enteritis
18	Annonaceae	<i>Annona squamosa</i>	Custard apple, Fasadabur	Leaves and seed	Headache and fever
19	Anacardiaceae	<i>Anacardium occidentale</i>	Cashew apple, Jambe	Fruits, bark and juice	Diabetes and skin infection
20	Anacardiaceae	<i>Mangifera indica</i>	Mango, Mangoro	Flowers, bark and leaves	Gastro-enteritis and fever
21	Combretaceae	<i>Sclerocarya birrea</i>	Cider tree, Danya	Bark and leaves	Dysentery and fever
22	Combretaceae	<i>Anogeissus leiocarpus</i>	African birch, Marke, Farar gamji	Stem bark	Stomachache and fever
23	Combretaceae	<i>Combretum nigricans</i>	Gum cmbretum, Ciriri, Dagara	Leaves	Cold and cough
24	Combretaceae	<i>Guiera senegalensis</i>	Senegal tree, Sabara	Leaves	Dysentery and hemorrhoid
25	Malvaceae	<i>Ceiba pentandra</i>	Kapok/Silk cotton tree, Rimi	Leaves and stem bark	Asthma and fever
26	Malvaceae	<i>Gossypium hirsutum</i>	Cotton, Auduga	Seed, root, leaves and flowers	Dysentery and bronchitis
27	Malvaceae	<i>Hibiscus sabdariffa</i>	Rossell, Zobarodo	Seed, root, leaves and flowers	High blood pressure
28	Arecaceae	<i>Phoenix dactylifera</i>	Datepalm, Dabino	Fruits and seeds	Stomach and toothaches
29	Arecaceae	<i>Borassus aethiopum</i>	Elephant palm, Giginya	Stem bark and fruits	Cough and asthma
30	Rutaceae	<i>Citrus aurantifolia</i>	Lime, Lemun tsami	Leaves and fruits	Typhoid fever
31	Rutaceae	<i>Citrus limon</i>	Lemon, Lemun masar	Leaves and fruits	Fever and cough
32	Euphorbiaceae	<i>Euphorbia hirta</i>	Malomay, Nonon kurchiya	Stem bark latex	Conjunctivitis, and dysentery
33	Euphorbiaceae	<i>Jatropha curcas</i>	Fig, Bini da zugu	Seeds, leaves and roots	Toothache, heartburn and fever
34	Myrtaceae	<i>Eucalyptus camaldulensis</i>	River red gum, Bishiyar turare	Leaves and stem bark	Typhoid fever and diarrhea

35	Myrtaceae	<i>Psidium guajava</i>	Guava, Gwaiba	Roots, leaves and bark	Toothache, constipation
36	Rhamnaceae	<i>Zizyphus Mauritania</i>	Chinese apple, Magarya	Fruits, seeds, leaves and roots	Constipation, fever and nausea
37	Rhamnaceae	<i>Zizyphus spinachristi</i>	Jujube, Kurna	Leaves, roots and fruits	Headache, inflammation and snakebite
38	Meliaceae	<i>Azadirachta indica</i>	Neemtree, Dogon yaro	Leaves and stem bark	Malaria fever
39	Balanitaceae	<i>Balanites aegyptiaca</i>	Desert date, Aduwa	Seeds and leaves	Headache
40	Capparidaceae	<i>Boscia salifolia</i>	Willow shepherd tree, Kaskas	Leaves	Headache and jaundice
41	Apocynaceae	<i>Calotropis procera</i>	Giant milk weed, Tumfafiya	Root and stem latex	Yellow fever and ear ache
42	Caricaceae	<i>Carica papaya</i>	Pawpaw, Gwanda	Leaves, roots and fruits	Asthma, ulcer and gastro-enteritis
43	Cucurbitaceae	<i>Cucurbita pepo</i>	Pumpkin, Kabewa	Seeds	Kidney stone, headache and hypertension
44	Cyperaceae	<i>Cyperus rotundus</i>	Nut sedge, Aya	Rhizome	Stomach ache
45	Ebenaceae	<i>Diospyros mespiliformes</i>	African ebony, Kanya	Root, leaves and bark	Malaria fever and headache
46	Moraceae	<i>Ficus sycomorus</i>	Fig tree, Baure	Fruits and stem latex	Ringworm
47	Lythraceae	<i>Lawsonia inermis</i>	Henna, Lalle	Fruits, leaves and bark	Jaundice and skin infection
48	Moringaceae	<i>Moringa oleifera</i>	Horse raddish, Zogale	Leaves and seeds	Asthma, aneamia and stomachache
49	Sapotaceae	<i>Vitellaria paradoxa</i>	Shea butter tree, Kadanya	Leaves and bark	Nausea and headache
50	Verbenaceae	<i>Vitex doniana</i>	Black plum, Dinya	Leaves and bark	Headache
51	Zingiberaceae	<i>Zingiber officinalis</i>	Ginger, Citta aho	Rhizomes	Asthma and bronchitis

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