

# Ethnomedicinal Survey of Plant Species Used In Managing Erectile Dysfunction (Ed) In Bayelsa State, Nigeria

Ihinmikaiye, S. O. <sup>1\*</sup>, Roberts, E.M. I. <sup>1</sup>, Ilesanmi, O. B. <sup>2</sup> and Simon, C. E. <sup>1</sup>

<sup>1</sup>Department of Plant Science and Biotechnology, Federal University Otuoke Bayelsa State, Nigeria

<sup>2</sup>Department of Biochemistry, Federal University Otuoke Bayelsa State Nigeria

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## Abstract

This paper considers ethnomedicinal process of the indigenous people of Bayelsa State in the context of plant species use for the management erectile dysfunction (ED). Open ended approach was used to fetch information on plant species for the management of ED in the study area. Meanwhile locals who comprised Traditional Medicinal Practitioners (TMPs) and elderly people ( $\geq 60$  years) that had maintained continuous domicile for a period not less than fifteen years were deliberately selected as the respondents. Important Value (IV) ascertained the significance of the species used for the treatment of ED, and abundant status was used to determine the species' abundance at source. Nineteen (19) plants species belonged to eighteen (18) families were assessed for ED management in the area, while eleven (11) of the species were used in synergistic blends. All the species accessed were wild plants, and were alleged to be safe and effective. However high IV was attached to *Spathandra blakeoides*, *Microdesmis puberula*, *Sabicea calycina*, *Sansevieria trifasciata*, *Carpolobia lutea*, *Elaeis guineensis*, *Urera rigida* and *Glyphaea brevis*; and abundance at source revealed that the occurrence of five of the plants were rare, and two occasional. Conservation of the species (especially the rare) is vital for their survival, hence approaches to this end were proposed.

**Keyword:** Plant species, Management, Erectile dysfunction, Conservation, Bayelsa State

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## I. Introduction

Nowadays plant species are becoming invaluable in providing healing and contributing toward the discovery of many pharmaceutically active plant base substances use in the commercial production of drugs (Addo-Fordjour *et al.*, 2012; Djah *et al.*, 2015). The reliance on plant materials for healthcare is fast becoming the way to go, and a good number have been tested for their salutary influences. WHO (2018) reported that about 3.5 billion people in developing counties relies on plant botanicals as the major source of their healthcare. Using plant materials in treating diverse kinds of diseases is a practice widespread among the rural dwellers of Nigeria. Studies have been carried out among people in rural areas of Nigeria to determined plant materials customarily used for managing organic and inorganic diseases. In Arowosegbe *et al.* (2015), 30 plant species belonged to 12 families were cited as being used in Ekiti State for the managing of diabetes mellitus, Olanipekun *et al.* (2016) documented 36 plants (belonging to 29 families) for the treatment of women related diseases in Akoko region of Ondo State. In a study on species and parts of plants use as remedies for fertility problems Nduche *et al.* (2015) reported 63 plant species from 41 families.

Studies on botanicals used in traditional treatments; ranging from management of sickle cell anaemia (Idu and Onyibe, 2007; Gbadamosi *et al.*, 2012), sexually transmitted infections (Ajibesin *et al.*, 2011; Nduche *et al.*, 2015), malaria and dysentery (Offiah *et al.*, 2011; Kayode and Omotoyinbo, 2013; Gera *et al.*, 2015), ante- and postpartum health care (Achinewu, 1995; Chima *et al.*, 2013; Shosan *et al.*, 2014), skin infections (Ajibesin, 2012; Erinoso *et al.*, 2016) and a whole lot has being widely conducted and reported. Yet, there is a dearth of studies on botanicals used for the treatment of Erectile dysfunction (ED); specifically, as it concerns the indigenous people of Bayelsa State.

ED has been defined as persistent inability of the male to get and keep penile erection firm enough for satisfactory sexual intercourse (NIH Consens, 1992; MayoClinic, 2020). The condition is often associated with a number of health problems (Pomerol, 2004). Nonetheless, there exist some form of knowledge on botanic blends used in managing the condition and related ailments among the indigenes of the State. This study examines the botanicals which have been successfully used traditionally by some of the indigenous people for ED treatment, and also proposes strategies for the conservation of the plant species.

## II. Material And Methods

### The Study Area

The study was conducted in Bayelsa State, an area rich in history, culture, flora and fauna, as well as fossil fuel. Bayelsa is a core section of the Niger Delta region of Nigeria, situated within latitude 4°15' North and 5°23' South; and longitudes 5°22' West and 6°45' East. The State has a human population of about 1,704,515 (Census Figures 2006), a land area of 9,415.8 Km<sup>2</sup> and about one-third of the land mass lies under water. The mean monthly temperature is in the range of 25<sup>0</sup>C to 31<sup>0</sup>C, with high relative humidity depending on the season of the year. Annual rainfall is between 2000-4500 mm occurs between March and November and dry season with sparse rainfall between December and February. The climate is tropical, having three distinct vegetation zones: lowland rainforests, fresh water swamp forests and mangroves (World Bank, 1995).

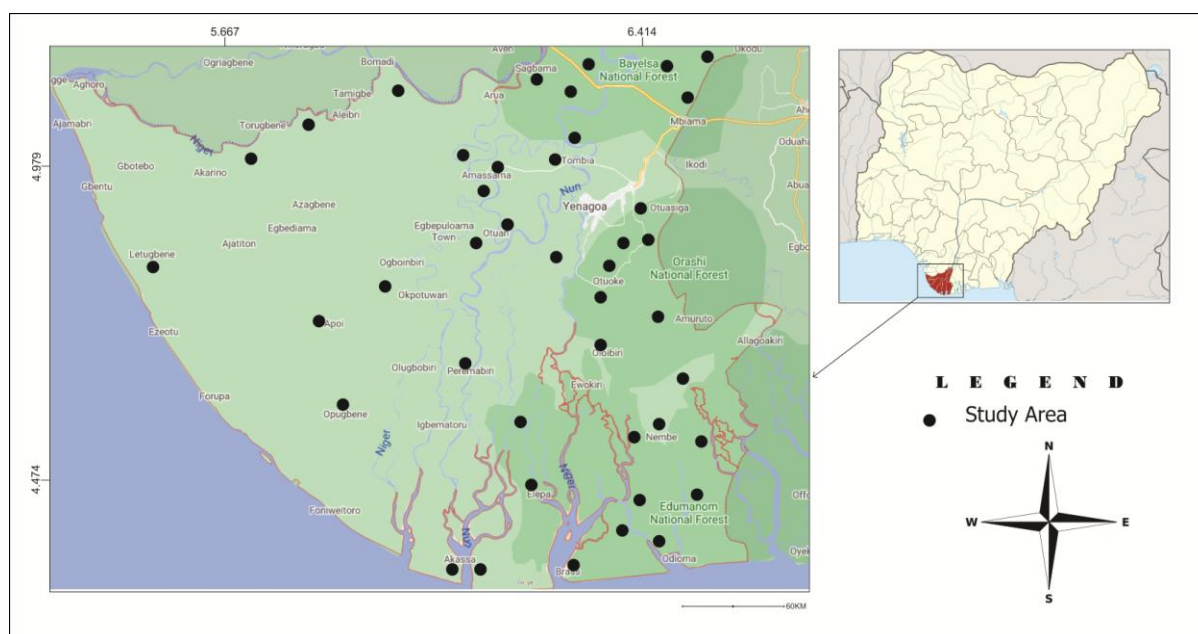


Figure 1: Map of Bayelsa State Showing the Study Areas

### III. Methods

The study was conducted between January 2020 and June 2021, and the information was fetched by open-ended conversations and direct field observation following Martin (1995). Two hundred and forty indigenes which comprised of Traditional Medicinal Practitioners (TMPs), and the elderly people ( $\geq 60$  years) that had maintained continuous domicile for a period not less than fifteen years were deliberately selected as respondents.

Ten respondents each were randomly sampled from twenty-four communities across the entire eight Local Government Areas (LGA) in the State, namely: Isampou, Odi and Sabagreia in Kolokuma/Opokuma LGA; Oluassiri, Olugama and Iyalakiri in Nnebe LGA; Opume, Oruma and Imringi in Ogbia LGA; Ebeni, Eriama and Amatolo in Sagbama LGA; Okotiana, Gbarain and Kalama, in Yenagoa LGA; Okpoma, Omugbene and Omiekiri in Brass LGA; Agoro, Kunu and Ayamasa in Ekeremor LGA; Odewari, Igeibiri and Otuan in Southern-Ijaw LGA. The structured questionnaire used was sectionalised and this requires information such as the plant species, vernacular name of the species, mode of preparation, plant botanical use and the abundant status of the plant species.

Voucher specimen were collected and scientific identification was carried out at the herbarium of the Department of Plant Science and Biotechnology, Federal University Otuoke, Bayelsa State, and University herbarium Ado-Ekiti, Ekiti State University

Besides, Important Value after Byg and Balslev (2001) was used to determine the proportion of respondents who regard a plant species as most significance for the treatment of ED. The value ranges from 0 to 1. Importance Value ( $IV_s$ ) =  $n_{is}/n$ . Where  $n_{is}$  is the number of respondents who considered species "s" most important,  $n$  = total number of the respondents.

The abundance of the species identified was determined within 500 metre radius or more from the centre of each community sampled, in each section of the study, by using the time taken to physically encounter the species. This procedure followed Bongers *et al.* (1988). Species encountered: in less than (<) 1 hour were considered as 'Very Abundant', between 1 and 24 hours as 'Abundant', between 24hours to 72hours (3days) as

'Frequent', between 72hours (3days) and 168hours (1week) as 'Occasional' and, those encountered after 1week as 'Rare'.

#### IV. Results And Discussion

The ability to identify, determine and choose the section of a plant for herbal cure is praxis for herbal medicine. The traditional medicine practitioners and the elderly people in the rural areas could identified plant species used for managing Erectile Dysfunction ED based on experience gathered through apprenticeship or oral transfer respectively. A checklist of the plants used for managing ED among the inhabitants of the study area is presented in Table 1. Nineteen (19) plant species belonging to 18 different families were identified in connection to ED management in the study area. The number of family entry suggested that the area is rich in plant species diversity. Important value (IV) demonstrates the significance of the species in the management of ED among respondents, and logically gives credence to their efficiency. Six of the species scored  $IV \geq 90$ , although 19 species were mentioned as treatment options for ED, species with higher IV value might implies greater effectiveness. This is in consonant with Tugume *et al.* (2016) assertion that the more effective a plant species is the higher its significant and rate of utilisation.

Botanicals such as inflorescence, leaves, roots and stems including twig were reportedly used in managing the condition by oral means (Table 2). However, root was the main section utilized. Some studies identified plant roots as peculiar portion in the cultural patrimony of Africa in traditional management and treatment option of many human diseases (Yineger and Yewhalaw, 2007; Cheikhoussef, 2011), It is assumed that roots contain more concentration of active ingredient, and were the customary parts utilized in the preparation of traditional herbal medicines (Tilahun and Mao, 2018). While the plants species used for managing ED were alleged to be safe, yet consumption of *C. lutea* decoction in small dose was advised. Generally, preparation and administration pattern varies from species to species, more often than not; oral route was the usual means of administration, either by chewing the section of interest or by sipping a decoction of the plant part steeped mainly in gin or water to enhance extraction of its bioactive ingredients. This mode of administration may not be unconnected to the use of additives and solvent assumed to serve as driver for the remedies (Tugume *et al.*, 2016). Besides, it was averred that some of the identified plants function best in synergy (Table 3). Eleven (11) species were allegedly involved in different synergistic blend. *P. guineense* was the most utilized species in synergy, however synergy in *C. prostrata* involves its leaves and the inflorescence pulverized in native oil. Synergistic blends involve the combination of two or more species for effectiveness. Studies carried out among indigenous people in different climes indicated that composite use of plants for the management of diseases is more effective than singleton, due to interactions that occur amid the different phytoconstituents in a species resulting in increased bioactive effect (Omotayo and Borokini, 2010; Ejike, 2013; Tounekti 2019; Obakiro *et al.*, 2020). While these species found usefulness in the treatment of ED, many of them were also allegedly safe for the treatment of some forms of ailments. Forest was usually the collections points and the methods employed have negative implications on forest ecosystem due to the unsustainable collection pattern which were mainly annihilative. It was inferred that some of the species were used for other economic purposes (Timber and medicine). The depletion in the forest estate of the area has been a subject of concern in the recent years, Residents of the area depend heavily on their environment for their livelihood hence deforestation rate had been rapid and unprecedented (Kayode *et al.*, 2016). This is further complicated by the degradation brought about by crude oil exploration and exploitation (Mmom and Arokoyu, 2010).

The curative potential of the identified plant species could serves as basis for further research focus in phytomedicine and pharmacological studies. Besides, documentation indigenous knowledge of plant via ethnobotanical studies is vital for conservation and utilization of plant resources, as it can facilitate future research on safety and plant efficacy in the management of ED. Besides, domestication of the species is a measure that could ensure the conservation of the species, and campaign for appropriate collection pattern for sustainable use is inferred.

**Table 1: Checklist of the Plant Species Used for Managing ED and the Ecological Status**

Botanical name	Voucher number	Family	Importance value	Abundance at source
<i>Ageratun conyzoids</i> (L.)	UHAE2021383	Asteraceae	0.74	Very abundant
<i>Aframomum melegueta</i> (K. Schum)	UHAE2021384	Zingiberaceae	0.52	"
<i>Anthocleista vogelii</i> Planch	UHAE2021385	Gentianaceae	0.66	Abundant
<i>Carpolobia lutea</i> G. Don	UHAE2021386	Polygalaceae	0.76	"
<i>Cyathula prostrate</i> (L.)	UHAE2021387	Amaranthaceae	0.68	Very abundant
<i>Elaeis guineensis</i> Jacq.	UHAE2021388	Arecaceae	0.92	"
<i>Elytraria marginata</i> (Vahl)	UHAE2021389	Acanthaceae	0.71	Abundant
<i>Erythrina senegalensis</i> A.DC.	UHAE2021390	Fabaceae	0.60	Occasional
<i>Garcina mannii</i> (Baker f.)	UHAE2021391	Clusiaceae	0.50	"
<i>Glyphaea brevis</i> (Spreng)	UHAE2021392	Tiliaceae	0.92	Rare

<i>Mallotus oppositifolius</i> (Geisel.)	UHAE2021393	Euphorbiaceae	0.66	"
<i>Microdesmis puberula</i> (Hook f.)	UHAE2021394	Pandaceae	0.93	Occasional
<i>Piper guineense</i> (Schum. & Thonn.)	UHAE2021395	Piperaceae	0.62	Very abundant
<i>Sabicea calycina</i> (Benth)	UHAE2021396	Rubiaceae	0.90	Frequent
<i>Sacoglottis gabonensis</i> (Baill.)	UHAE2021397	Huminaceae	0.72	Rare
<i>Sansevieria trifasciata</i> (Prain)	UHAE2021398	Asparagaceae	0.93	Frequent
<i>Struchium sparganophora</i> (L.)	UHAE2021399	Asteraceae	0.72	"
<i>Spathandra blakeoides</i> (G. Don)	UHAE2021400	Melastomataceae	0.92	Occasional
<i>Urera rigida</i> (Benth) Keay	UHAE2021401	Urticaceae	0.83	Rare

**Table 2: Plant Species Used for Managing Erectile Dysfunction in Bayelsa State**

<b>Botanical name:</b> <b>Common/ local name</b> <b>Flora parts used</b> <b>Preparation/ Administration:</b>	<b>1.</b> <i>Ageratum conyzoids</i> L. Goat weed / Oboye Inflorescence & leaves The inflorescence & alligator pepper ( <i>Aframomum melegueta</i> ) when chewed together, in parallel with local drink (gin) yields firm & stiff penile erection.	<b>2.</b> <i>Anthocleista vogelii</i> Planch. Cabbage tree/ Osuo Roots The roots infusion arouses sexual desire.
<b>Botanical name:</b> <b>Common/ local name</b> <b>Flora parts used</b> <b>Preparation/ Administration:</b>	<b>3.</b> <i>Carpolobia lutea</i> G. Don ingolongolo Roots  The roots infusion in gin & a spoon full of honey stimulates the penis & yield erection.	<b>4.</b> <i>Cyathula prostrata</i> (L.)  Oborikorigha/Pasture weed The leaves & inflorescence are squashed & mixed with native oil Treats, restores erection & cure venereal diseases
<b>Botanical name:</b> <b>Common/ local name</b> <b>Flora parts used</b> <b>Preparation/ Administration:</b>	<b>5.</b> <i>Elaeis guineensis</i> Jacq. Palm tree / Lugu-tin The base of the seedling Chew the base of the seedling regularly to treat ED, & for firm erection.	<b>6.</b> <i>Elytraria marginata</i> (Vahl) Elytraria / Kenibuotien, Inflorescence & leave A decoction of the species in local gin cures ED when taken orally, and administer routinely on daily basis
<b>Botanical name</b> <b>Common/ local names</b> <b>Flora parts used</b> <b>Preparation/ administration</b>	<b>7.</b> <i>Erythrina senagalensis</i> A.DC. Coral tree/Ugurizi Stem The stem decoction in local gin arouse penis	<b>8.</b> <i>Glyphaea brevis</i> (Spreng.) Monach. Masquerade stick/ Itolo Stem/twig Decoctions of the Stem/twig in local gin restores erection
<b>Botanical name</b> <b>Common/local names</b> <b>Flora parts used</b> <b>Preparation/ administration</b>	<b>9.</b> <i>Mallotus oppositifolius</i> (Geisel.) Mull. Arg. Indian kamila/Furu-ipain Roots A decoction of the roots in local gin serves as aphrodisiac.	<b>10.</b> <i>Microdesmis puberula</i> (Hook. f. ex Planch) Microdesmis, Akpalata, Ingolongolo Fruits, bark & leaves Eat the fruits; A decoction of its bark, leaves, & the root of <i>Carpolobia lutea</i> in gin cures ED.
<b>Botanical name</b> <b>Common/local names</b> <b>Flora parts used</b> <b>Preparation/ administration</b>	<b>11.</b> <i>Sabicea calycina</i> (Benth) Sabicea / Kalakumu Stem Swallow the juice while using the tiny stem as chewing stick	<b>12.</b> <i>Sacoglottis gabonensis</i> (Baill.) Urb. Bitter bark tree/Tala Bark Use the stem bark decoction & <i>Piper guineense</i> in local gin to stimulates penis
<b>Botanical name</b> <b>Common/local names</b> <b>Flora parts used</b> <b>Preparation/ administration</b>	<b>13.</b> <i>Sansevieria trifasciata</i> (Prain) Snake plant Leaves Leaves decoction & <i>Piper guineense</i> water decoction cures weak erection	<b>14.</b> <i>Struchium sparganophora</i> (L.) Kuntze Boukiriologbo/Bush bitter leaf leaves Eat the sp. as leafy vegetable in soup to manage ED.
<b>Botanical name</b> <b>Common/local names</b> <b>Flora parts used</b> <b>Preparation/ administration</b>	<b>15.</b> <i>Spathandra blakeoides</i> (G. Don) Barakori-tin Entire part A decoction of the plant, seeds of <i>Piper guineense</i> & the root of <i>Garcina mannii</i> in gin cures ED.	<b>16.</b> <i>Urera rigida</i> (Benth.) Keay  Owei-ombi leaves A blend of the leaves and black pepper roots decoction treats ED

**Table 3: Species Reportedly Use in Synergistic Blend for ED Management**

S/N	Plant Blend
1.	<i>A. conyzoids</i> and <i>A. melegueta</i>
2.	<i>M. puberula</i> and <i>C. lutea</i>
3.	<i>C. prostrata</i> (leaves & inflorescence) and native oil

4. *S. blakeoides*, *Garcinia mannii* and *P. guineense*
5. *S. gabonensis* and *P. guineense*
6. *S. trifasciata* and *P. guineense*
7. *U. rigida* and *P. guineense*

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### References

- [1]. Arowosegbe, S.; Olanipekun, M.K. and Kayode, J. (2015). Ethnobotanical survey of medicinal plants used for the treatment of Diabetes mellitus in Ekiti-State Senatorial districts, Nigeria. *Eur. J. Bot. Plant Sci. Phytol.* 2(4):1-8.
- [2]. Djah, F. M.; Danho, F. R. N.; and Kouakou, L. K. J. (2015). Medicinal plants and traditional healing practices in ehotile people and around the aby lagoon (eastern littoral of Cote d'Ivoire). *J. Ethnobiol Ethnomed.* 11:21.
- [3]. Addo-Fordjour, P., Belford, E. J. D., & Akonnor, D. (2013). Diversity and conservation of medicinal plants in the Bomaa community of the Brong Ahafo region, Ghana. *Journal of Medicinal Plants Research*, 2(9): 226-233.
- [4]. Achinewu, S.C., Aniena, M.I. and Obomanu, F.G. (1995). Studies on spices of food value in the South eastern states of Nigeria I: Antioxidants Properties. *J. African Med. Plants* 18:135-139.
- [5]. Ajibesin, K.K. (2012). Ethnobotanical survey of plants used for skin diseases and related ailments in Akwa Ibom State, Nigeria. *Ethnobot. Res. Appl.* 10:463-522.
- [6]. Ajibesin, K.K.; Bala, D.N, and Umoh, U.F. (2011). The use of medicinal plants to treat sexually transmitted diseases in Nigeria: Ethnomedicinal survey of Niger Delta Region. *Int. J. Green Pharm.* 5:181-91.
- [7]. Cheikhoussef, A., Mapaure, I. and Shapi, M. (2011). The use of some indigenous plants for medicinal and other purposes by local communities in Namibia with emphasis on Oshikoto region: a review. *Res. J. of Medicinal Plant.* 5(4): 406-319.
- [8]. Erinoso, S.M.; Fawibe, O.O; Oyelakin, A.S.; Ajiboye, A.A, and Agboola, D.A. (2016). Herbal recipes used for the traditional management of infantile dermatitis in Odeda, Southwestern Nigeria. *Afr. J. Tradit. Complement. Altern. Med.* 13(3):33-43.
- [9]. Ejike, C.E.C.C., Awazie, S.O., Nwangozi, P.A., Godwin, C.D., (2013). Synergistic post- prandial blood glucose modulatory properties of *Vernonia amygdalina* (Del.), *Gongronema latifolium* (Benth.) and *Occimum gratissimum* (Linn.) aqueous decoctions. *Journal of Ethnopharmacology* 149,111–116.
- [10]. Gbadamosi, .I.T. and Oyedele, T.O. (2012). The efficacy of seven ethnobotanicals in the treatment of skin infections in Ibadan, Nigeria. *Afr. J. Biotechnol.* 11(6):3928-3934.
- [11]. Idu, M. and Onyibe, H. I. (2007). Medicinal plants of Edo State, Nigeria. *RJMP* 1(2): 32-41.
- [12]. Impotence. NIH Consens Statement Online (1992). 10(4):1-31.
- [13]. Kayode, J. and M.A. Omotoyinbo (2013). Roots Extractivism in Indigenous Malaria Control in Ekiti State, Nigeria *Global J. of Science Frontier Research Biological Science.*13(7):2-5.
- [14]. Kayode J., Ihinmikaiye S. O., Arowosegbe S., Oyedeji A. A. (2016). Conservation of Botanicals Used for Carving by the Ijaw Ethnic Group of Bayelsa State Nigeria. *International Journal of Natural Resource Ecology and Management.* 1 (2): 58-62.
- [15]. Martin, G J (1995). *Ethnobotany: a methods manual*. Chapman and Hall Pub., London.
- [16]. Mmom, P. C. and Arokoyu, S. B. (2010). Mangrove forest depletion, biodiversity loss and traditional resources management practices in the Niger Delta, Nigeria. *Research Journal of Applied Sciences, Engineering and Technology* 2 (1), 28-34.
- [17]. Obakiro, S. B., Kiprof, A, Kowino, I., Kigonda, E., Odero, M. P., Omara, T. and Bunalema, L. (2020). Ethnobotany, ethnopharmacology, and phytochemistry of traditional medicinal plants used in the management of symptoms of tuberculosis in East Africa: a systematic review. *Tropical Medicine and Health*, 48-68.
- [18]. Olanipekun, M.K.; Arowosegbe, S.; Kayode, J.O. and Oluwole, T.R. (2016). Ethnobotanical survey of medicinal plants used in the treatment of women related diseases in Akoko Region of Ondo-State, Nigeria. *Journal of Medical Plant Research.* 10(20):270-277.
- [19]. Offiah, N. V.; Makama, S.; Elisha, L. I.; Makoshi, M.S.; Gotep, J. G.; Dawurung, C.J.; Oladipo, O.O.; Lohlum, A.S.; and Shamaki, D. (2011). Ethnobotanical survey of medicinal plants in the treatment of animal diarrhoea in Plateau State, Nigeria. *BMC Veterinary Research*, 7:36. <http://www.biomedcentral.com/1746-6148/7/36>
- [20]. Nduche, M.U., Omosun, G. and Okwulehie, I.C. (2015). Ethnobotanical Survey of Plants Used as Remedy for Fertility Conditions in Ebonyi State of Nigeria. *Scholars Academic Journal of Biosciences SAJB.* 3(2B):214-221.
- [21]. Gera, Y.; Ume, E. U.; Tor-Anyiin, T. A. and Iheukwumere, C. C. (2015) Ethnobotanical survey of anti-diarrheal medicinal plants among Tiv people of Nigeria. *Archives of Applied Science Research.* 7 (6):16-21.
- [22]. Chima U.D., Ofodile E. A. U. and Okorie M. C. F. (2013). A Survey of Plants Used in the Treatment of Ante-Natal and Post-Natal Disorders in Nneochi Local Government Area of Abia State, Nigeria. *Green Journal of Biological Sciences.* 3 (6): 229-237.
- [23]. Tilahun, T. J. and Moa, M. (2018). Ethnobotanical Study of Medicinal Plants Used to Treat Human Diseases in Berbere District, Bale Zone of Oromia Regional State, South East Ethiopia. *Hindawi, Evidence-Based Complementary and Alternative Medicine.* Vol. 2018, pp. 1-16.
- [24]. Tugume, P., Kakudidi, E.K., Buyinza, M., Namaalwa, J., Kamatenesi, M., MUcunguzi, P., and Kalema, J. (2016). Ethnobotanical survey of medicinal plant species used by communities around Mabira central forest reserves, Uganda. *Journal of ethnobiology and ethnomedicine.* Vol. 12(5): 1-28.
- [25]. World Bank (1995). *Defining an environmental development strategy for the Niger delta.* 2 Vols. Industry and energy operations, West Central Africa Department, Africa region. Washington: World Bank.
- [26]. Yineger, H. and Yewhalaw, H. (2007). Traditional medicinal plant knowledge and use by local healers in Sekoru District, Jimma Zone, South-western Ethiopia, *Journal of Ethnobiology and Ethnomedicine.* Volume 3, article 24.

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