

ETHNOBOTANICAL USES OF PLANTS BY THE IJAW PEOPLE IN PATANI, DELTA STATE, NIGERIA

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ABSTRACT

This study was conducted to collect indigenous traditional knowledge about plants and their uses by the Ijaw people in Patani, Delta State, Nigeria. The ethnobotanical data were gathered through oral interview with native individuals comprising fourteen females and ten males of diverse age groups between 40 to 80 years. Twenty four (24) plant species belonging to eighteen (18) families were investigated including plants from families of Fabaceae, Euphorbiaceae, Asteraeae, Solanaceae, Poaceae, Musaceae, Convolvulaceae, Lamiaceae, Compositae amongst others which are utilized by native people for various purposes such as antidotes for poisoning, medicine, food, timber, adornment etc. Mostly used plant parts were leaves, stems, roots, barks, fruits and sometimes the whole plant. The results demonstrated that the area is rich in floral diversity but has not been studied extensively. This study provides baseline information of the ethnobotanical uses of plants in the area there by contributing to floral diversity conservation.

KEYWORDS: Ethnobotany, medicine, phytochemicals, Ijaw people.

INTRODUCTION

Ethnobotany is a distinct branch of natural science which deals with various aspects such as anthropology, archaeology, botany, ecology, economics and medicine, religious, cultural and several other disciplines (Sharma and Kumar, 2013). The term ethnobotany was first used by John Harshberger in the year 1895 (Sharma and Kumar, 2013). It refers to the relationship and interaction between indigenous people with plants (Ajaib *et al.*, 2014).

The importance of ethnobotanical utilization of plants among diverse indigenous people of the world cannot be over emphasized due to the increasing awareness of the vast potentials which are present in plants (Erhenhi, 2016). The use of medicinal plants for disease control in various communities will continue to play an important role in medical health care delivery in the developing countries of the world (Agbogidi, 2015). Phytochemicals present in plants includes tannins, phytate, saponins, alkaloids, flavonoids, cyanogenic glycerides (Obichi *et al.*, 2015). Others include carotenoids, steroids, phenolics, terpenoids, oxalates, glycosides cardiac glycosides (Akeem *et al.*, 2016). Herbal medicine practice in Nigeria currently is attracting serious attention from scientific and industrial community and

world health organization supports the use of herbal medicine provided they are proven to be efficacious and safe although not without pros and cons and drug – drug interactions. Nigeria tropical rainforests abounds with medical plants with promising medicinal values and activities that need to be researched. Grants to researches and research institutes will open new field. The traditional medicine Bill needs to be passed into law for it to be fully integrated into health care system (Falofdu and Imieje, 2013).

Due to the ongoing developmental activities, the traditional wisdom developed over centuries is vanishing rapidly. Spices phytochemicals have established as carcinogenesis blockers by modulating cell proliferation pathways transformation, inflammation and metastasis. They have been found to be immunity boosters and diminish inflammatory disorders (Butt *et al.*, 2013).

Akeem (2016) noted that spices and other medicinal plants were still under – utilized in Nigeria due to lack of adequate knowledge of their health potentials.

Therefore, documentation of valuable information known to the indigenous people has become imperative to preserve ages-old traditional knowledge which is mostly transferred by the word of mouth from one

Descriptive statistical analysis such as charts was used in summarizing the ethnobotanical data.

RESULTS

A total of twenty four (24) plant species belonging to twenty four (24) genera and eighteen (18) families were recorded in the present study which are being used for a variety of purposes by native people of Patani Local Government Area, Delta State. The detailed inventory is provided in Table 1 which includes local names followed by botanical names, family and ethnobotanical uses. The plants have different habits which range from trees, herbs and shrubs as shown in Figure 2. Plants collected showed that the herbs had the highest percentage plant utilization

while trees were least in preference as compared to herbs which is followed by the percentage value for shrubs.

The analysis of the ethnobotanical data showed that the different plants play vital roles in the treatment of various ailments as well as for the sustainability of the locals as shown in Table 1. Major proportions of species were used for medicinal purposes while others were used for timber wood, food and other economic uses. The different plants and plant parts (leaves, roots, barks, seeds and fruits) are used for diverse purposes. The mode of administration varies from plant to plant as shown in Table 2.

Table 1: The local, botanical, family names and ethnobotanical uses of plants found in Patani, Delta State, Nigeria.

| S/N | Local names | Botanical names | Family | Ethnobotanical uses |
|-----|-----------------|-------------------------------------|----------------|---|
| 1 | Okobutoru | <i>Solenostemon monostachyus</i> L. | Lamiaceae | 1) to stop stooling 2) to heal wounds |
| 2. | Okeberi | <i>Portulaca oleracea</i> (Linn.) | Portulacaceae | 1) for the treatment of ulcer 2) for proper development of foetus |
| 3 | Yonkore | <i>Aspilia oleracea</i> (Pers.) | Compositae | 1) for treatment of burns and scalds |
| 4 | Furokenna | <i>Ocimum gratissimum</i> | Lamiaceae | 1) used as antibiotics 2) used to cure convulsion 3) for preparing local delicacies |
| 5. | Okponkuro Pomu | <i>Manihot esculenta</i> | Euphorbiaceae | 1) stops bleeding 2) used for the preparation of various staple foods. |
| 6. | Angulo (Linn.) | <i>Heteropogon contortus</i> | Poaceae | 1) used for motivating the production of breast milk |
| 7. | Guava pomu | <i>Psidium guajava</i> | Myrtaceae | 1) used to stop stooling |
| 8. | Tonkabien | <i>Phyllanthus amarus</i> | Euphorbiaceae | 1) to heal wounds 2) used for the treatment of diarrhea |
| 9. | Beri | <i>Bryophyllum pinnatum</i> (Linn.) | Crassulaceae | 1) used for baby navel 2) for the treatment of cough |
| 10. | Lobulor | <i>Elaeis guineensis</i> (Jacq.) | Arecaceae | 1) for snake bites 2) for food 3) for making native soap |
| 11. | Agbinigbini | <i>Mimosa pudica</i> | Fabaceae | 1) it stops bleeding |
| 12 | Kpuke duku pomu | <i>Ipomoea batatas</i> | Convolvulaceae | 1) used as food 2) used as blood tonic |
| 13 | Ebenitein | <i>Dacryodes edulis</i> | Burseraceae | 1) eaten as food |
| 14 | Yeghere | <i>Terminalia ivorensis</i> | Combretaceae | 1) used for canoe carving and for making planks |
| 15 | Origbo | <i>Vernonia amygdalina</i> (Dev.) | Asteraceae | 1) used to treat malaria 2) used as an antidote for charm or poison |
| 16 | Oporu-enge | <i>Euphorbia hirta</i> (Linn.) | Euphorbiaceae | 1) for breast milk production 2) used as dye for body tattoos |
| 17 | Oborikore | <i>Pupalia lappaceae</i> (Linn.) | Amaranthaceae | 1) for the treatment of wounds 2) used as an antidote for charm |
| 18 | Obori-ila | <i>Coix lacryma</i> (Linn.) | Poaceae | 1) seeds used as beads for adornment |
| 19 | Wonii-diri | <i>Senna occidentalis</i> (Linn.) | Fabaceae | 1) used to drive snakes away from environment 2) used as medicine for fish trap |
| 20 | Tala | <i>Sacoglottis gabonensis</i> | Humiraceae | 1) fruits used as chewing gum 2) trunk is best for canoe carving |

| | | | | |
|----|-------------|--------------------------------------|------------|---|
| | | | | 3) bark is used to flavor palm wine 4) Heartwood is used to carve axe handle |
| 21 | Okilolo | <i>Symphonia globulifera</i> (Linn.) | Guttiferae | 1) used for making paddles 2) used for making gum 3) used as timber |
| 22 | Enine | <i>Chromolaena odorata</i> | Asteraceae | 1) for the treatment of fever |
| 23 | Ekpudo | <i>Musa paradisiaca</i> | Musaceae | 1) it stops bleeding 2) it is used as food |
| 24 | Tomato pomu | <i>Solanum lycopersicum</i> | Solanaceae | 1) used as food 2) used for the treatment of cataract and other eye infections |

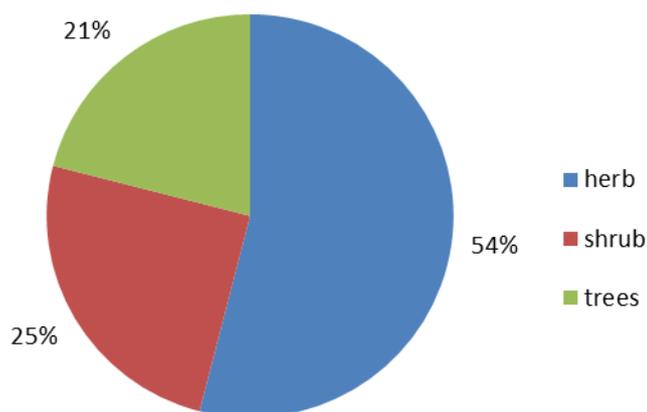


Figure 2: Percentage of plants according to habits collected from Patani Local Government Area, Delta State.

DISCUSSION

The interaction between plants and humans is very strong and can never be separated as the dependence is obligate (Amjad *et al.*, 2015). Plant resources lead to the economic wealth of the inhabitants of an area. The twenty four indigenous plants collected play very vital roles in the collective lives of Patani people. The number of species collected showed the rich flora of the ecosystem. The diverse utilization of these plants by the people showed varied mode of administration of the plants in medicine, food as well as other cultural activities (Gottardi *et al.* 2016). The most widely used plant remedies by Patani people were obtained from herbaceous species which ranked the highest category of 13 species (54%) followed by the shrub species with 6 species (25%) and the tree species (21%). Similar findings were reported for herbs in the treatment of various human ailments (Pan *et al.*, 2014). Several authors including Parvaiz (2014), Singab (2015), Gottardi (2016) have reported the utilization of plants in previous works. Different plants may be used to cure the same ailment but their method of application may vary or differ (Erhenhi, 2016). When one plant is not available, a substitute that serves the same purpose is used. While the leaves of *Ocimum gratissimum* are used for the treatment of catarrh, it was reported to be used as a medicine for constipation and also spices in cooking food (Erhenhi,

2016). *Aspilia africana* was reported to be used to treat various infections of bacteria origin such as gonorrhoea, stomach trouble etc (Essiet and Akpan, 2013) while it is being used for the treatment of burns and scalds as revealed by this study. The use of *Phyllanthus amarus* for several health problems such as diarrhoea and dysentery was confirmed by Verma *et al.* (2014) to be used for the same purpose. *Portulaca oleracea* was also reported to be used for the treatment of diarrhoea, dysentery etc (Mubashir *et al.*, 2011) and also for the treatment of ulcer.

Table 2: Parts used, botanical name and mode of administration of some of the local plants.

| S/N | Part used | Botanical name | Habit | Mode of administration |
|-----|-----------------------------|-------------------------------|-------|---|
| 1 | Leaf | <i>Portulaca oleracea</i> | Herb | 1) Pound leaves until soft and add small native salt and palm oil. Take one tablespoon twice daily for ulcer 2) Take leaves with garlic for proper development of the foetus |
| 2 | Leaves | <i>Bryophyllum pinnatum</i> | Herb | 1) Eat fresh leaves daily for medicine against bullet wounds |
| 3 | Leaves | <i>Pupalia lappaceae</i> | Herb | 1) Chew fresh leaves together with alligator pepper (<i>Aframomum melegueta</i>) as an antidote for charm. |
| 4 | Leaves | <i>Vernonia amygdalina</i> | Shrub | 1) Squeeze juice from leaves, add little salt and drink daily as treatment for malaria. |
| 5 | Seeds | <i>Coix lacryma L.</i> | Herb | 1) Collect seeds and join them together with strings to be worn on the neck or wrists as adornment. |
| 6 | Trunk, fruits and heartwood | <i>Sacoglottis gabonensis</i> | Tree | 1) Chew fruits as chewing gum 2) Use the trunk for carving canoe 3) Use the heartwood to make axe handle |
| 7 | Leaves | <i>Ipomoea batatas</i> | Herb | 1) Take decoction of leaves daily for blood |
| 8 | Leaves | <i>Ocimum gratissimum</i> | Shrub | 1) Pound leaves together with pepper <i>piper nigrum</i> and tie the mixture strongly around the dislocated part of the body. |
| 9 | Leaves | <i>Phyllanthus amarus</i> | Herb | 1) Tie leaves to open wounds to stop bleeding 2) take tincture of leaves daily for diarrhea |
| 10 | Leaves | <i>Elaeis guineensis</i> | Tree | 1) Treat snake bites with poultice made with palm fronds |
| 11 | Stem | <i>Musa paradisiaca</i> | Herb | 1) take the decayed part of the stem that is close to the root and place on open wounds to stop bleeding |
| 12 | Leaves | <i>Solanum lycopersicum</i> | Herb | 1) put few drops of the juice from the leaves on the eyes for the treatment of cataract and other eye disease |
| 13 | Root | <i>Heteropogon contortus</i> | Herb | 1) Uproot the plant from the ground, rinse the root with little water and rub it on the breast to motivate breast milk production. |

CONCLUSION AND RECOMMENDATION

The survey indicates that there is a high potential for ethnobotanical use of the existing flora so there is a strong need for their protection and conservation and that can only be achieved through the involvement of the local communities. Some of the medicinal plants identified so far should serve as a guide to the government, health care workers, agricultural extension experts and even modern medicinal experts in forming an integrating health system that could serve the common goal of maintaining, enhancing and sustaining good health are in Patani LGA. Since the uses of these plants are based on empirical knowledge, the scientific study of all these herbal drugs is highly desirable to establish their efficacy for safe use. It is also observed that some traditional plants in that area are fast eroding. Conservation efforts are needed by protection of these plants with maximum participation of local people. Deforestation should be discouraged as this result in loss of plant species. Afforestation should be enforced so that people who cut down trees would ensure that it is planted again.

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