

Linking language, knowledge, and the environment: The case of plants in Bimbila

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Abstract

The importance of medicinal plants in traditional practices cannot be undermined giving that medicinal plants have gained much interest in current research and the conservation of our biodiversity (Terashima, 2003). However, information on the use of plants for traditional medicine in the South West Region of Cameroon is lacking. This study documents the linguistic and the biodiversity of plant resources used by the local inhabitants as treatment or cure for various ailments. From an anthropological and ecolinguistic approach, the following research techniques: participatory observations, visits to the field, and questionnaire surveys were used to elicit information on the uses of the plants. It was discovered that over 73 plant species are commonly used by the Isubu people for treating over 40 diseases and disorders. The highest number of species is used for stomach disorders, followed by cold, cough and fever and gastrointestinal disorders, such as constipation, gastritis, worms, etc. For instance, the dried leaves of tobacco (*nicotiana tabacum*) are used as a treatment for hiccup. Similarly, the use of *màsèpò* (*ocimum gratissimum* L. Forsk) together with other plants for the preparation of a traditional recipe for the treatment for malaria. The Documentation of the language and knowledge on plants used as traditional medicines is, therefore, necessary so that the knowledge can be preserved and the utilized plants conserved and used sustainably. The current investigation, therefore, attempts to fill some of the gaps in indigenous knowledge related to the use of herbal medicines in the South West Region of Cameroon, emphasizing their role in basic human health care.

Keywords: *Ethnobotany, ecolinguistics, traditional knowledge*

1.0 Introduction

The knowledge contained within indigenous languages is not easily replaced or transferred to other language communities. Every language is embedded with

the unique cultural wisdom of a people given that linguistic diversity is important to human heritage. A such, the loss of any language is a loss for all humanity (UNESCO 2003: 3). The present study seeks to contribute to the documentation of an endangered language by providing ethnolinguistic data on the medicinal use of plants by a traditional community in the South West Region of Cameroon. Linguistics, culture and biological diversity are interdependent and one aspect of culture and language which is under threat in most language communities is the traditional ecological knowledge. Isubu is an endangered language spoken by the Bimbia people (Atindogbé, 2009), the traditional ecological knowledge of this community is the concepts and terminologies that reflect the understanding of the people and their interaction with the natural world. Consequently, when the language is not used in this domain, the associated knowledge is lost to the community.

1.1 Background

In the domain of traditional medicine, plants and their body parts have long served as a source of medicinal drugs in different parts of the world and in most distinct human cultures. There is currently a dire need for the conservation and sustenance of our rich biodiversity taking into consideration the vast resources obtained from plants and the threat of the ecosystem due to the degradation and consequent unsustainable use of resources (Maffi, 1996). Furthermore, taking into account this observation coupled with a situation where the language is identified as endangered which could lead to the loss of rich and valuable local knowledge, the medicinal knowledge on plants becomes inevitable. Thus, the need for the documentation of the language including the rich medicinal knowledge on plants stands as a major endeavor for a research of this kind. Ethnolinguistics has raised concerns about the impact of endangerment on biodiversity, as some of the most valued plant species are also threatened with extinction. In this context, ethnolinguistic studies on the traditional ecological knowledge and practices of traditional communities around the world are of the most relevance, as they help to establish and enrich the global information bank of plant species most used in traditional medicine, exposing their ecological and cultural values. The documentation of this traditional ecological knowledge of medicinal plant in Isubu (an endangered language) contributes in enhancing its vitality. The use of herbs have usually served as the repository of healing materials and have been acknowledged to be originally served with little or no side effects. That is, many have been known not to pose any threat to human life. Besides healing, many plants particularly the leaves and roots of the plants are mostly consumed for their nutritional values without much consideration for their medicinal values and the species of these plants are either found in the neighbourhoods or the bushes. As a result, we need to re-orientate our knowledge on the sustainability of the use of our natural resources particularly in this era of economic recession on how to use raw materials for medicine and to harness the rich flora to improve primary health care.

1.2 Location of Bimbia

Bimbia is a village along the coast in the South West Region of Cameroon, mainly in the west coast and Limbe 2 sub-Division, Fako division. It is commonly called the slave village in Cameroon due to the major activities that took place there during the slave trade era and it presently poses as a touristic site. It is located around the Bimbia estuary area east of Limbe and west of Douala, at the foot of Mount Cameroon. The language spoken in this area is called Isubu, an appellation which can both be used to refer to the people as well as the language. According to Eberhard, David M., Gray F. Simons and Charles D. Fenning (2020) Isubu is classified as a Narrow Bantu language of the Duala group (A231) spoken in the South West Region, Fako Division, Tiko Subdivision.

Taking into account scrutiny of the sociolinguistic situation of the language based on the nine (9) factors of UNESCO's vitality and endangerment assessment show that Isubu is "severely endangered" (UNESCO, 2003; Atindogbé, 2009). With a population less than 1000 speakers of the language, the number keeps declining, compounded by the fact that the language is hardly spoken any longer and is being replaced by CPE.

1.3 Method

An area survey was carried out for the plants present around the surroundings of Bimbia. The types of plants used for medicinal purposes were identified and recorded. We used participant observation and semi-structured interviews were carried out with 25 consultants. We employed the SPSS analytical Package to bring out the use-value (UV) of the medicinal plants.

A list of common plants within the South West Region was made available to the language consultants and some plants samples were identified around the neighbourhoods. While others which could not be readily identified their pictures were made available. The medicinal values of the identified plants were obtained from the language consultants and some Bimbia inhabitants especially women (mothers).

1.4 Discussion

The table above presents information on the medicinal uses of some plants by the Bimbia people. It provides the local taxonomy of the plants alongside their common and scientific names. This is to enable easy identification and understanding of the data.

The findings from the study indicate a great diversity of the therapeutic usefulness of phytonyms in Bimbia and reveal the value and importance of these plants within the community, as they enhance both the nutrition and health care of the average Bimbia population even though experiencing the harsh economic situation.

1.5 Ethnolinguistics of selected plants and their cultural importance

One corollary of a language being endangered is the danger of losing the biodiversity of its ambience along with loss of knowledge, concepts and traditions encoded in them. The preservation of linguistic folk knowledge therefore, also helps in the preservation of its biodiversity and examining of the naming mechanism of plants leads to a better understanding of the relationship the people share with their natural environment. This section seeks to express the link between language, folk knowledge and the environment. It is divided into three sub-sections.

The first section presents the onomastics and the local ecological knowledge of a sample of 27 plants as used in the targeted study area. It provides the scientific names, followed by the local and the common names of the plants. Our choice of such plants was limited to the plants peculiar to the area. However, the analysis is based on the local appellations and the folk knowledge of 92 plant species in the language. The second section provides a linguistic analysis of the naming of the plants and how it reflects its cultural importance. The third section provides a quantitative analysis of the varying cultural values of the plants with the main focus on the medicinal uses of the plants.

1.5.1: Plants and their medicinal uses

Out of the ninety-three (93) plants and their major uses documented in Bimbia seventy-three were found to be used for medicinal purposes. After examining ninety-two species alongside their folk and cultural importance within the Bimbia community, I realized that 39.0% are medicinally important and have therapeutic uses. However, the leaves of the plants were found to be mostly used for medicinal purposes. Other parts of the plants such as the stem, seeds/fruits, roots and barks in some cases are also useful medicinally.

1. *Ageratum conyzoides* (èwòlá ɸàkó), common name: king grass

The leaves are harvested and smashed to extract liquid dropped into the nostrils of the patient suffering from headaches. Alternatively, the leaves of èwòlá ɸàkó are wrapped in plantain leaves, put in hot wood-ash and allowed to steam up for some few minutes. The leaves are then smashed and the liquid dropped in the nostrils. In cases of severe headache, the heated leaves are used to massage the forehead of the patient and the fresh leaves are smashed and inhaled. Furthermore, the leaves and roots of èwòlá ɸàkó are boiled for about 30 minutes and the liquid served as enema/laxative as a treatment for skin rash locally called *ndɛ́-tíndɛ́-tí* (found on the bodies of young babies). It can also be administered as enema without boiling. The liquid from the smashed leaves is administered as a treatment to ease movement in children, experiencing complications in normal growth. The smashed leaves are also used as iodine on fresh wounds to stop bleeding and another leaf placed on it to avoid infection before rushed to the hospital for proper treatment.

2. *Annanas comosus* (ḍʒaṁngá) common name: pineapple

ḍʒaṁngá is an edible fruit. the peelings of the pineapple and even the pineapple itself, with some plants such as fever grass/lemongrass, the bark of a mango tree, plum and guava leaves are boiled together and the concoction drunk as a treatment for malaria fever. It is also used in making fruit juice

3. *Aframomum melgueta* (ndóngó mündá) common name: alligator pepper

Few seeds of *ndóngó mündá* are chewed and swallowed with warm or to heat the lungs and relieve the individual from cough. It is advisable not to consume it during pregnancy because it could lead to abortion.

4. *Aloe vera* (*aloe vera*) common name: aloe vera

Few leaves of aloe vera are washed and the outer layer neatly peeled off to expose the inner layer which produces a slimy liquid. This liquid is extracted and drunk as a treatment for stomachache or stomach disorder, and also used as an antidote for food poisoning or any deadly poisons.

5. *Bidens pilosa* (ndṁ ndṁ kàḃàtíwélí “injection for the poor”) common name: blackjack, devil’s needles. The leaves of the plant are used as a blood booster. For someone suffering from blood shortage, the leaves are boiled and the liquid drunk three times daily.

6. *Bryophyllum pinnatum* (èlìwàlìwà) common name: never die

The leaves of *èḃèjálìwà* are heated over the fire, smashed with the hands and two drops of the fluid from the smashed leaves dropped into the ears morning, afternoon and evening as a treatment for pains inside the ear. In some situations, this fluid is accompanied by kernel oil commonly called *mànyàngà*. The fluid needs to be administered when the ear to be effective.

7. *Cocos nucifera* (gbé mbànga mó likàwò) “coconut tree”

gbé mbànga mó likàwò produces edible fruits called *mbànga mó likàwò* and the roots are used as medicine for toothache. The roots are boiled for an hour and the liquid administered to the patient to gaggle in the mouth for about 20 minutes. This action is done twice day: in the morning and the evening until the pain subsides. The fruit is also used to extract oil which is used in cooking and as a body oil.

8. *Carica papaya* L. (ḡḡḡḡ) common name: pawpaw

ḡḡḡḡ is used as the name of a plant and a fruit (edible). The dry leaves of ḡḡḡḡ are harvested, washed and boiled together with pineapple peelings and fever/lemongrass for over an hour, and the concoction drunk as treatment fever. Also, the seeds are chewed and swallowed with a glass of water as a treatment for intestinal worms.

9. *Citrus aurantifolia* (é ḡùma nyḡḡḡḡ) common name: lime

É Ɔ̀ma ny Ɔ̀pinyà is an edible plant and also used as medicine. One is washed, cut into two and boiled, the lime liquid served in a glass and drunk in the mornings and evenings to decongest the chest. Also, the juice squeezed out from it is added in a bucket or bowl of bathing water and used as a treatment for body or foot odour.

10. Cymbopogon (*lìmàsèkù/màsèkù*) common name: fever grass, lemongrass

lìmàsèkù/màsèkù acquired the common name fever grass because the villagers identified it as the master home remedy for treating colds, fevers (especially malaria) and menstrual cramps. The leaves are boiled and the liquid drunk while hot. It is also drunk cold as a muscle toner and to improve on the skin by reducing pimples.

11. Distemonanthus benthamianus (*m Ɔ̀ggè*) common name: movingui

m Ɔ̀ggè is used in making fishing boats, furniture in homes and as firewood. The bark of the tree is ground and used for an enema with children and believed it makes them grow stronger and smarter.

12. Emilia coccinae (*lítólámbgà*) common name: rabbit grass

The leaves of *lítólámbgà* are washed and eaten raw by the individual as a treatment for stomach disorder and gastritis.

13. Eremomastax speciosa (*mbúsà ibǎ*) common name: green and red, two-sided leaf

The leaves of *mbúsà ibǎ* are used as a treatment for Ɔ̀tí Ɔ̀tí Ɔ̀tí, a common skin rash in young babies. The leaves are smashed and the liquid mixed with kernel oil (*màjàngà*) is used as a body lotion or rubbing oil. The fresh leaves are heated over the fire and smashed, the extracted liquid served in a teaspoon. This is to ensure that the treatment works both inside the stomach and on the body. The liquid can also be served as an enema to the child. Also as a treatment for heat-rash and measles, the liquid extracted from smashed leaves is mixed with ground *kalaba-chalk* (a brownish-white, edible chalky substance) and applied on the body.

14. Manihot esculenta Grantz (*likpàmbà*) common name: cassava

Both the bunch of tuber-type roots of *likpàmbà* and its leaves are both edible. The leaves are also used as anti-poison medicine. the young fresh leaves of the cassava plant are washed, smashed and the liquid squeezed into a glass and drunk by the individual to neutralise the poison. The cassava tuber is used to fabricate starch used for the treatment of clothes during laundry.

15. Mimosa pudica (*è̀nàngí Ɔ̀*) common name: touch me not

The leaves of *è̀nàngí Ɔ̀* are crushed mixed with water and administer as an enema as a treatment for scabies and as an internal cleansing agent.

16. Musa sapientum (*m Ɔ̀k Ɔ̀*) common name: plantain

The stem of *m̀k̀* is used during local child delivery. The pregnant woman sits on small plantain leaves to lift her body from the floor, during delivery. This is to ensure that the baby together with its placenta can be carefully received on the plantain leaves.

The sucker is also used to bury the navel or dried cord of the newborn baby. Traditionally, the umbilical cord is buried together with a plantain sucker or coconut seedling. It is believed that as the plantain sucker or coconut seedling grows to maturity and bears fruits so too will the child grows to maturity. Consequently, when the child grows to adulthood he/she is shown the plant which the child now owns. It symbolises life. The liquid from the stem functions as a natural glue. It is mostly used on corpses to shut the eyes or the mouths. The young bunch seed */kpé jàlik̀/* symbolizes a child and use when burying women who die during childbirth leaving behind the child. The young seed is harvested and placed in the arms of the deceased in a comfortable position like a mother nursing her baby. It is believed that if this is not done the dead mother can feel very lonely without the child and may come back for her baby which would lead to the death of the baby immediately after the burial of the mother. The leaves of the plantain are used as medicine to cure night fire. They are boiled and the liquid drunk and administered as an enema. Also, the plantain fruit is edible and widely consumed within the community.

17. *Nicotiana tabacum* (tâkò) common name: tobacco

βèjálí βétâkò "tobacco leaves" are used for medicinal purposes as a treatment for headaches, hiccough and to stop bleeding. As treatment for headaches, the dried leaves are ground to dust and sniffed through the nostrils, for hiccough the dried leaves are water for some time to extract its tobacco content and the liquid drunk and to arrest bleeding the fresh leaves are ground into a paste and applied on the fresh wound.

18. *Ocimum gratissimum* L. Forsk (m̀s̀ϕ̀ò) common name: m̀s̀ϕ̀ò

The ethanolic extract of the leaves of *m̀s̀ϕ̀ò* is used in traditional medicine as a treatment of several ailments such as wounds, skin and gastrointestinal infections, etc. The parts of the plant used are the leaves and the stems. the leaves together with other different types of fruits, tree leaves (such as mango, orange or pawpaw) are boiled in a big pot with water and administered differently as a treatment for malaria. Firstly, the patient undresses, sits on a small stool in front of the hot pot containing the concoction covered with a blanket to inhale the hot vapour and aroma, and sweats out the fever. After which he drinks a glass of the concoction either cold or hot three times daily.

Furthermore, as a treatment for stomach ache the leaves are boiled and drunk as tea. As treatment for nose bleeding, the leaves are warmed over the fire, squeezed and the extract dropped into the nostrils.

Also, as medicine for headache, the leaves are smashed in between the palms for some seconds and the aroma inhaled. And as a laxative, the leaves are harvested, washed, smashed and warm water poured into the content and used

for enema. The stems of *más* are used as toothbrushes and the aroma suppresses mouth odour. Traditionally this plant is said to have supernatural powers and is believed to be particularly effective in sending away evil spirits.

19. *Psidium guajava* (ngwáβá) common name: guava

ngwáβá produces an edible fruit and the stem is used as firewood for home cooking. The young leaves are harvested, washed and chewed as a treatment for stomach aches and dysentery. The young stems are used as chewing sticks (toothbrush) for their good taste and ability to remove mouth odours.

20. *Solanum scabrum* (βòwá wòsángò) common name: huckleberry, country *dámàdámá*

βòwá wòsángò produces edible leaves and the infusions from smashed leaves and seeds are rubbed onto the gums of children who have developed crooked teeth. Also, the smashed seeds are used as a dye for the slates of school pupils.

21. *Saccharum officinarum* (mókòkó) common name: sugar cane

mókòkó is edible and also used as a treatment for waist pain. The leaves, known as “*tátúw*”, of the species that itches are boiled and taken as an enema to relieve waist pain.

22. *Senna alata* (è̀nàngidz) common name: ringworm bush “craw-craw”

The leaves of *è̀nàngidz* are used as medicine for skin rash. They are smashed and rubbed on the affected area of the body. The leaves are also used for the enema to clean the stomach and it is squeezed and the liquid drunk as a treatment for internal stomach fungi.

23. *Spilanthes filicaulis* (lís lákómbé) common name: cock’s eye

The stem of *lís lákómbé* is used to treat toothache. It is ground together with alligator pepper, until it forms a paste, and applied to the aching tooth. Also as treatment of palpitation in the child “*liw*” the leaf is ground together with nine grains of alligator pepper and a spoonful of the mixture administered preferably at 4 pm when it sunsets.

24. *Talinum fruticosum* (b̀l̀bí) common name: waterleaf

b̀l̀bí is an edible plant and the leaves are smashed along with water and administered as an enema as a treatment for measles and as a laxative.

25. *Telferia occidentale* (ék̀̀h̀́b̀́) common name: fluted pumpkin

ék̀̀h̀́b̀́ is an edible vegetable and the leaves are used as a medication for blood shortage and as antibiotics. Liquid from squeezed leaves of two or three bundles of *ék̀̀h̀́mb̀́* is mixed with two tins of peak milk and a bottle of Guinness and drunk. This concoction increases the blood level and provides strength against any form of sickness. Also, as a treatment for typhoid fever, the liquid from the squeezed leaves is served in a glass and drunk morning and evening.

26. *Vernonia amygdalina* (βèjálí βé ndòl) common name: bitter leaf

This plant is edible and the leaves used for varied purposes. The young leaves of βèjálí βé ndòl are smashed into a paste and applied on fresh wounds to arrest bleeding before the patient is rushed to the hospital. Also, the leaves are washed and smashed with some quantity of water, and the bitter liquid drunk as a treatment for diabetes and stomach pains.

27. *Zingiber officinale* (dʒndʒi) common name: ginger

dʒndʒi is steeped in boiling water to make ginger tea, and drunk as a tea with honey. It is also used to make candy or ginger drink. Tea brewed from ginger is a common folk remedy for colds and cough (consumed with honey).

1.5.2: Linguistic analysis of the naming of plants in Isubu

Linguistically, these plants are locally identified and given names based on their morphological structures as well as their importance to the people. The study structures the naming process of the plants species into five classes adopted from Linnaeus's 19th century classification. Taking into account their morphological structures the plants were classified into the following classes; leafy/vegetables, trees, grass, grains & tuber products

1.5.2.1: Plants identified as leafy/ vegetables**Classis 1: leafy/vegetables**

Names in Isu	Common names
βé jálí	tea
βèjálí βé ndòl	bitterleaf
βèjálí lí ɸ́n ndókó	parsley
βèjálí lí ɸ́n ndókó	celery

In this classis, these plants are described as leafy plants or vegetables because it is the leaves that are used for a particular purpose. For instance, βèjálí βé ndòl 'bitterleaf' is identified as leaves used in the preparation of *ndole* (a common Cameroonian dish) and parsley and celery as leaves used in the preparation of soup. Isubu does not have a peculiar name for some plants but describes them by referring to their specific uses.

1.5.2.2: Plants identified as trees**Classis 2: trees**

Names in Isu	Common names
líjà	palm tree
lisá	chewing stick
èléjá lí nýng	rubber tree
mẃngè	movingui
mwèngè	hardwood, African padauk
βèkónyá	sapelle
βèkónyá	eucalyptus

Most of the plants so classified grow in the forest, bushes have great heights. These plants are of great importance to the Bimbia people because they use them to build fishing boats, paddles, furniture, medicine, etc. The plants identified as trees in this language are mostly fit in as nouns of class 5 and 7.

1.5.2.3: Names of plants identified as grass

Classis 3: Grass

Names in Isu	Common names
βòwá	green
βòwá	eru
βòwá	huckleberry ‘country ndzàndzímá’
βòwá	cabbage
βòwá	lettuce

The taxonomy of the plants identified as grass in Isubu, are not, as a rule, peculiar to the set-ups but are cultivated elsewhere and purchased from the markets or brought in from far away bushes. They are thus considered as foreign and simply called *grass* like any other plant that grows around, without any particular identification.

1.5.2.4: Plants identified as grains

Classis 4: Grains

Names in Isu	Common names
mbàsi	maize
kòndì	rice
kɔ̃ ɔ̃ í	coffee
ndóndá	garlic
ng̃nd̃	groundnuts
bíndz	pea/beans

These plants are clearly identified within Bimbia and are locally named and classified as class 9 nouns. Their classification takes account of their morphological composition.

1.5.2.5: Plants identified as tuber products

Classis 5: Tuber products

Names in Isu	Common names
likàwò	cocoyams
lidzàngá	pineapple
likpàmbà	cassava
liwòkí	pumpkin
èwá já málíwá	water yam
βékpàngú	sweet potato

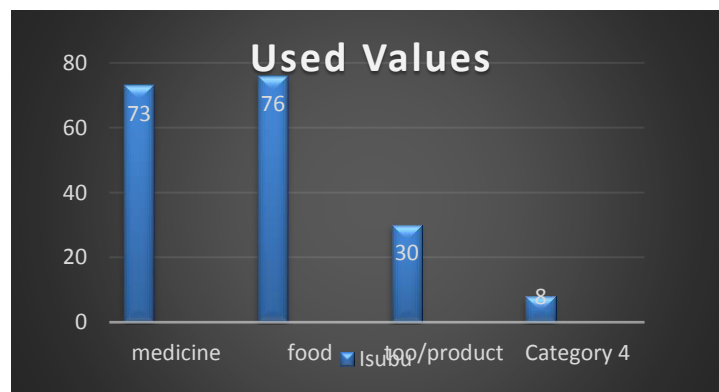
These plants are locally identified and given names based on their morphological structures as well as their importance to the people. The plants in Isubu are placed in the noun class gender 7/8, 3/4, 5/6, and 14/6a where they obtain their singular and plural forms, respectively. The folk taxonomy of plants in Isubu is culture-bound, the naming of these plants reflecting the peculiarity of the people's culture.

The study has established that the naming of plants used for medicinal purposes is mostly culturally bound. The linguistic techniques employed in naming takes into account the phonological and morphological constitution of the language. For instance, if a name is borrowed into the language, it is adapted and domesticated to respect the morpho-syntactic constraint of the language, for example the names of plants such as $\varphi\varphi$ "pawpaw", $k\acute{a}r\varphi\grave{t}i$ "carrot" and $\varphi\grave{n}\varphi\acute{s}i$ "onion" are borrowed and rendered in Isubu respecting the Open CV syllable structure constraint of the language. Furthermore, the linguistic technique of duplication in the naming of some plants such as $s\grave{a}w\grave{a}s\acute{a}w\grave{a}$ (sour taste) "sour sop", $k\grave{e}n\grave{e}k\acute{e}n\acute{e}$ (slimmy) "kreng kreng" and $\grave{e}n\acute{o}mb\grave{a}n\acute{o}mb\acute{a}$ (smelling) "basil" are used to describe the morphology and semantic contents of the plants which influences how they are used.

Also, some plants are named using adjective modifiers, describing the function or content of the plants which consequently reflect and influence their usages as treatments for certain illnesses (plant N^o 9 above).

A summary statistics of the different uses of plants as medicine, food, tools and in performing traditional rites in Isubu is provided on the chart below.

Chart 1: Plants and major uses in Isubu



The data reflected in the chart above indicate the used values and different usages of the plants examined in this research. These statistics used to arrive at the various used values of the different plants in the language is obtained from the data on the different uses of the plants. The majority of them are used for more than one purpose within the communities.

Researching on ninety-two plant species describing their folk knowledge and cultural importance, we observe that plants are mostly used for food scoring a

used value of 40.6%, followed closely by plants scoring a medicinal Application Value of 39.0%, for manufacturing tools, register 16% and used for traditional purposes scoring 4.3%. Taking into consideration the statistic reflected in the chart above, the medicinal application value is one of the major used values of plants in Isubu.

Majority of these medicinal plants are found around the neighbourhood of the habitats of the people Bimbina but not much of it is not known to the local community due to the lack of the use of language. The endangered aspect of the language hinders the transmission of this important folk knowledge, from the old to the young. As a result, most of these plants are destroyed and endangered when their habitats undergo developmental, activities by man. This study, therefore, buttresses the fact that there is a need for the language to be safeguarded to avoid the loss of valuable ethnolinguistic knowledge which is vital to improving the welfare of the people.

1.6 Conclusion

The plants are important to the Bimbina community and bring to light the need to research and document folk knowledge on them for future use, especially as there is the minimal transmission of the language from the older generation to the younger and even less transmission of the folk knowledge of these plants. This study has thrown more valuable light to the fact that traditional botanical medicine is effective, safe, locally available in local languages, consequently, its persistence boosts the community's ethnolinguistic identity and strengthens the value of consuming their biological, ecological and linguistic diversity of the Bimbina community. This study, therefore, comes in to enhance language maintenance. Also, the collection of plant species and the knowledge associated with the various usages/practices are identified in the female domain among the Bimbina people.

Recommendation

The study recommends that the government should encourage and strongly integrate traditional healers and ethnomedical knowledge into national healthcare systems.

Also, taking into consideration the interdependence of linguistic and biodiversity to education, the study recommends that appropriate education should be done in the local language and in which traditional knowledge is valued. This fact is also buttressed in Article 27 of the UN International Covenant on Civil and Political Right which enhances the right to use one's language. As such mother tongue education is of primer importance because languages that are not used as main media of instruction will cease to be passed on to children and likewise the traditional ecological knowledge embedded in the languages. Consequently, enhancing literacy and language vitality.

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