



## ETHNOBOTANY OF SOME MEDICINAL PLANTS USED FOR COMMON AILMENTS IN THE ARID AND SEMI ARID REGIONS OF BORNO STATE.

yagana tayib alkali, isa marte hussaini, zainab abubakar bello, fanna ali baba,

### ABSTRACT

*A preliminary survey of medical values of some plants in Maiduguri, Borno state revealed that 10 different plant species, exotic and indigenous are on common use for the treatment of more than 10 common diseases prevalent in the state. Mainly the information on the medicinal values of some plant was generated through one on one interview using vernacular language of the respondent who are herbalist farmers and traders. The identified plants are Aloe vera (Linn) Allium sativum (Linn), Acalia nilotica (L) Willd. Ex DEL, Acacia faidherbia (Del.) chev. Pisidium guajara (Linn) Carica papaya (Linn) Adansonia digitata (L) Managifera indica (L) Azaderachta indica A. Juss, Tamrindus indica (Linn.) These plants are used to cure malaria fever, typhoid fever, diarrhea, diabetes, stomach ulcer, hypertension, pneumonia, open wound, scabies and other skin disease. This investigation highlights some plants of medicinal values uses and the active chemical ingredient the commonest diseases that are being cured by these plant species are also mentioned alongside with the most used herb in curing different ailments. In the same vein percentage of people using different plant species for the treatment of different disease was evaluated. This paper briefly discusses the implication and concludes with some recommendation to improve on the use of these plants such as creating evidence on safety, efficacy, and quality of plant products through scientific and clinical trials of medicinal plants and other aspects such as botanist should be encourage the acquisition, identification, documentation, development and dissemination of knowledge in natural medicine.*

### Key words

Malaria, Medicinal plants, diseases. Typhoid, treatment, herbalist.

### INTRODUCTION

North eastern Nigeria within which this study was conducted is the least on making in terms of human development index is high illiteracy rate is high and gender dispiriting, high percentage of people to health facilities is also very high and access to such facilities low. The decline in economy has a lot of implication on the health status of majority of the rural drivellers who cannot afford the high cost of modern days. The use of plant in treating disease can be traced to the remote past. Although modern medicinal science have developed to a great extends many

people in developing countries of the world still depend on plant products and herbal remedies for treating their ailments (Manzoor and Maksuda 1998) plant of medicinal value have been recognized to cure different diseases and the contain active ingredient in aerial or underground parts of plants. Plants are known from ancient time as sources of food, shelter cloth and medicinal (personal communication site). Before the 20<sup>th</sup> century the people of Nigerian and other African countries have had to depend on the medicinal plants for treatment of various ailments, in using plants for medicinal purposes, almost every part of the plants was used. However, with the advent of modern medicine by British in the early 20<sup>th</sup> century some of the people corned to the new drug as they were freely given or brought at cheap affordable cost. Plants are very first and only true medicine and the extracts of azadirachtin has an antipyretic properties and effective analgesic (koul.,1990) Towards the end of the century, however, the increase in population high rate of poverty and ignorance made people to return back to the use of herb for treatments of diseases, in fact 80% of Nigerian's especially in the rural areas and ghetto (slums) relay on medicinal plants for treatments of different ailments (Aliyu 1994). Although the importance of plants in the services of man and indeed the health sector need no emphases, there is little documentation on the status of these plants and the disease they cure hence this preliminary study will contribute towards knowing the different plants of medicinal value in the area and the number people using plants. The World Health Organization WHO estimates that 4 billion people or 80 percent of the World population presently use herbal medicine for some aspect of primary healthcare. The WHO has noticed that the demand for medicinal plants is increasing in both developing and developed countries due to growing recognition of natural products, more so as these substances are mostly non-narcotic, having little side-effects, readily available at affordable prices and sometime the only source of healthcare available to the poor. Medicinal plants have traditionally occupied an important position in the socio cultural, spiritual and medicinal arena of rural and tribal lives of India (Anonymous, 1999).

## MATERIALS AND METHOD

All the plants are collected from the garden, forest and within the environment. 100 questionnaires were distributed, and oral interviews were done regarding the study plants use in the selected area. People interviewed include herb sellers, hunters, full time as well as part time herbalist, old and young women and men in the market, homes and their various place of work. The plants were at hand for identification purposes. During oral interview specific questions were asked and information obtained by respondents were recorded and language of communication during interview was based on the language they understand that is vernacular such as Kanuri, Hausa, Shuwa and others .the herbalist were observed collecting and mixing the various types of herbs and the mode of preparation and administering

## Result and discussion

At the end of the survey 100 plant species were identified harm medicinal values. These plants were group into their respondent families, local names, parts in use, disease types and active chemicals were also provided. Percentage of people using dual purpose species to treat more than one disease was evaluated malaria fever had highest percentage 17.9% while other ailments is second on the list with 15.8% followed by typhoid fever 14.2%, diarrhea had 11.1% diabetes and hypertension had 4.7% and 3.2% on the lowest in percentage respectively.

### PERCENTAGE OF PEOPLE USING DIFFERENT PLANT SPECIES FOR TREATMENT OF SEVERAL DISEASES.

Table 1.

| Treatments                      | Replication No. of people |   |   |   |   | Total | Percentage |
|---------------------------------|---------------------------|---|---|---|---|-------|------------|
| Malaria                         | 1                         | 2 | 3 | 4 | 5 |       |            |
| Typhoid                         | 7                         | 7 | 8 | 9 | 3 | 34    | 17.9       |
| Diarrhea                        | 6                         | 3 | 8 | 8 | 2 | 27    | 14.2       |
| Diabetics                       | 3                         | 6 | 4 | 4 | 4 | 21    | 11.1       |
| Stomach ulcer                   | 4                         | 2 | 3 | 0 | 0 | 9     | 4.7        |
| Hypertension                    | 3                         | 4 | 3 | 6 | 3 | 19    | 10.0       |
| Treatment of open wounds        | 3                         | 0 | 3 | 0 | 0 | 6     | 3.2        |
| Scabies and other skin diseases | 5                         | 3 | 3 | 2 | 2 | 15    | 7.9        |
| Pneumonia                       | 4                         | 6 | 2 | 1 | 4 | 17    | 8.9        |
| Others                          | 4                         | 5 | 2 | 1 | 0 | 12    | 6.3        |
|                                 | 9                         | 7 | 5 | 5 | 4 | 30    | 15.8       |

### AVERAGE NUMBER OF PEOPLE USING DIFFERENT PLANT SPECIES AS MEDICINAL.

Table 2.

| Treatment        | Replication No. of people |   |   |   |   | $\bar{X}$ | $\Sigma x$ | SD   |
|------------------|---------------------------|---|---|---|---|-----------|------------|------|
| <i>Aloe vera</i> | 2                         | 6 | 8 | 3 | 7 | 5.2       | 26         | 10.4 |

|                           |   |   |    |   |   |     |    |      |
|---------------------------|---|---|----|---|---|-----|----|------|
| <i>Allium sativum</i>     | 7 | 8 | 10 | 7 | 7 | 7.8 | 39 | 15.6 |
| <i>Acacia nilotica</i>    | 7 | 5 | 6  | 6 | 3 | 5.4 | 27 | 10.8 |
| <i>Acacia albida</i>      | 3 | 5 | 3  | 7 | 2 | 4.0 | 20 | 8.0  |
| <i>Psidium guajava</i>    | 6 | 8 | 11 | 4 | 3 | 6.4 | 32 | 12.8 |
| <i>Carica papaya</i>      | 5 | 9 | 12 | 6 | 3 | 7.0 | 35 | 14.0 |
| <i>Adansonia digitata</i> | 5 | 5 | 8  | 6 | 5 | 5.8 | 29 | 11.6 |
| <i>Mangifera indica</i>   | 5 | 6 | 13 | 8 | 4 | 7.2 | 36 | 14.4 |
| <i>Azadirachta indica</i> | 6 | 6 | 10 | 3 | 3 | 5.6 | 28 | 11.2 |
| <i>Tamarindus indica</i>  | 7 | 2 | 12 | 8 | 2 | 6.2 | 31 | 12.4 |

At the end of the survey the mean values calculated for the number of people using these plants species as medicine shows that *Allium sativum* has highest mean value 7.8 and standard deviation SD15.6 while *acacia albida* showing lowest mean of 4.0 and standard deviation of 8.0

In addition, the mean values calculated for people using the different plant species shows alternation in use. summary up this investigation revealed that majority of the people in the rural communities in Borno state depend on herbal medicine for the treatment of their various ailments. It also indicated that all plants of these plants leave, bark, flower, twigs, roots and seeds. The plants also contained various active chemicals as follows: Tannins, Gums, alkaloid, saponin, resins, citric and malice acids alongside with Aloctin a minerals such as potassium magnesium, papuin, nicotin acids, carpaninmeliantriol glycosides etc. most of this active ingredient constitute chemicals used in pharmaceutical industries and Biochemically play an important role.

## Conclusion

The most commonly used plants as herb for medicinal purpose are *Aloe vera*, *Allium sativum*, *acacia nilotica*, *Acacia Albida*, *Psidium Guajava*, *Carica Papaya*, *Adansonia Digitata*, *Mangifera Indica*, *Tamarindus Indica*, and the most prominent diseases that are cured are malaria fever, typhoid fever, diarrhea, diabetics, stomach ulcer, hypertension, treatment of open wound, scabies and other skin diseases, pneumonia, and others. All the information was obtained through questionnaires and oral interviews, data obtained were analyzed to evaluate the percentage of people using different plant species for treatment of different diseases and the average number of people using different plant species as medicinal. It is therefore necessary to

list out these plants and their medicinal use which may help a comprehensive knowledge on the medicinal plants.

### Recommendation

On the basis of the outcome of this research it is obvious that plants of medicinal values are found in Borno state and are been utilized by majority of people living in the rural areas, consequently the urgent need to conserve these plants need no emphasis. This present study has set the pace for further work on this plant such as toxicology and biochemical analysis are fertile ground to explore it should be an attempt & control the use of these plants of medicinal value in such a way as to ensure their continuous availability by way of policy the government need to establish herbal gardens and people from all work of life should be able to realize the immense contribution of these plant to the health service and the local economy. Government should start afforestation by enforcing illegal cutting and disfiguring of these plant and promote the use of this plants in curing ailments just like American and china did. Protection of these plants would warrant their continuous references.

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