

## **ACCESS AND USE OF MEDICINAL PLANTS FOR CURING AND PREVENTING COMMON AILMENTS AMONG RURAL DWELLERS IN ABIA STATE, NIGERIA**

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### **Abstract**

The study was conducted in Abia State of Nigeria to analyze access and use of medicinal plants for curing and preventing common ailments among rural dwellers. Questionnaire was used to collect data from a sample of 120 respondents used for the study. Data generated were analyzed through the use of descriptive and inferential statistics. Results further showed that medicinal plants were accessed at high extent ( $x= 3.3$ ) and used at high extent ( $x= 2.5$ ). The perceived reasons for accessing and using medicinal plants were that they were culturally acceptable, affordable, very beneficiary and adaptable. The study concludes that medicinal plants in curing/ preventing common ailments among the rural dwellers were accessed and used in high extent. It equally concluded that the reasons for the high access and use of medicinal plants were due to their being culturally acceptable, affordable, available and adaptable to the respondents in the study area. The study therefore recommends that Governments of Nigeria and that of Abia State should encourage the standardization in the use of herbal medicine since a very reasonable proportion of the citizenry still access and use them to high extent in curing / preventing some common ailments in the study area.

**Keywords: Medicine, plants, curing, preventing, ailments, rural, dwellers**

### **Introduction**

Green plants produce oxygen and manufacture food for man. They serve as food, building materials, shelter and protective agents, fossils and fuels and importantly as medicines. It was based on the above, that Sandberge and Corrigan (2000) postulated that plant is an

important source of medicine that plays a key role in world health. They further stated that plants have been known to be an important potential source of therapeutics or curative aids. Their use in the tropical and subtropical regions is diversified and most of the uses are for medicine, source of food, clothing and shelter. They therefore, concluded that the use of medicinal plants has attained a commanding role in health system all over the world. This involves the use of plants not only for the treatment of diseases but also as potential material for maintaining good health and conditions.

Many countries in the world, about, two-third of the world's population depend on herbal medicine for primary health care (Oladeji, 2016). The reason for this is because of herbal plants have better cultural acceptability, easy availability and affordability, better compatibility and adaptability with the human body and pose lesser side effects (Oladeji, 2016). On the other hand, Khan (2002) noted that the use of herbal medicine was due to poverty, ignorance and unavailability of modern health facilities, that most people especially rural people are still forced to practice the use traditional medicines for common ailments, most of these people form the poorest link in the trade of medicinal plants. He further noted that a vast knowledge of how to use plants against different illnesses may be expected to have accumulated in areas where the use of plants is still of great importance. Principe (1991) equally stated that in the developed countries, 25 per cent of the medical drugs are based on plants and their derivatives.

Medicinal plants, according to Oladeji (2016), are those plants that are commonly used in treating and preventing specific ailments and diseases that are generally considered to be harmful to humans. These plants are either “wild plant species” those growing spontaneously in self-maintaining populations in natural or semi-natural ecosystems and could exist independently of direct human actions or the domesticated plants species” that is those plants that have arisen through human actions such as selection or breeding and depend on management for their existence (Oladeji, 2016). Herbal medicines, also, called botanical medicines refer to herbs, materials, preparations and finished products that contain parts of plants or other plant materials as active ingredients (Owoyale, Olatunji and Oguntoye, 2005). These plant materials include seeds, berries, roots, leaves, bark or flowers. Medicinal plants constitute an effective source of both traditional and modern medicine (Oladeji, 2016). Continuing, Oladeji (2016) observed that plants have been used as sources of remedies for the treatment of many diseases since ancient times and people of all continents especially Africans have this old tradition. However, the medicinal uses of

plants are rapidly declining among the present generation of local people as a consequence of modernization and civilization (Cox, 2005). According to Cox (2005), the younger generation is showing little interest in learning this valuable science of healing. Use of medicinal plants to cure diseases has also been much influenced by religious practices (Wambebe, 1999).

Despite the remarkable progress in synthetic organic medicinal products of the twentieth century, over 25% of prescribed medicines in industrialized countries are derived directly or indirectly from plants (Newman et al., 2000). However, plants used in traditional medicine are still understudied in developing countries, notably in West Africa where new drugs are not often affordable (Kirby, 1996). Thus, up to 80% of the population uses medicinal plants as remedies. Hostellmann and Marston, (2002) equally noted that herbal medicine is an integral part of "Traditional Medicine" (TM). They noted that TM has a broad range of characteristics and elements which earned it the working definition from the World Health Organization (WHO). Traditional medicines are diverse health practices, approaches, knowledge and beliefs that incorporate plant, animal and/or mineral based medicines, spiritual therapies, manual techniques and exercises which are applied singularly or in combination to maintain well-being, as well as to treat, diagnose or prevent illness (WHO, 2008). In the developed countries, TM has been adapted outside its indigenous culture as "Complementary" or "Alternative" medicine (CAM) (WHO, 2002). WHO (2005) summarized the definition of traditional medicine as the sum total of all the knowledge and practical, whether explicable or not, used in the diagnosis, prevention and elimination of physical, mental or social imbalance and relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing. It equally, noted that TM might also be considered as a solid amalgamation of dynamic medical know-how and ancestral experience. In Africa, traditional healers and remedies made from plants play an important role in the health of millions of people (Owoyale; Olatunji and Oguntoye, 2005). TM has been described by WHO (2008) as one of the surest means to achieve total health care coverage of the world's population. Numerous medicines have been derived from the knowledge of tropical forest people and clearly there will be more in the future. This alone is reason enough for any and all programmes to be concerned with the conservation, development and protection of tropical forest regions (WHO, 2008). Several studies (Khan, 2002; Owoyale; Olatunji and Oguntoye, 2005; Oladeji, 2016) have shown that mostly in West African many people

patronize TM because of its low cost and benefits, availability, affordability, cultural acceptability, complementary to modern health care system and absence of orthodox medical facilities. It was based on the above premise that the study: access and use of medicinal plants for curing and preventing common ailments among rural dwellers in Abia State, Nigeria was conducted. The study therefore sought answers to the following research questions: what are the commonly used medicinal plants for preventing and curing some common ailments? What is the extent of access to some medicinal plants by the respondents? What is the extent of use of some medicinal plants by the respondents? What are perceived reasons for use of medicinal plants in the study area?

Specifically, the study sought to:

- (i) identify commonly used medicinal plants for preventing and curing some common ailments;
- (ii) ascertain the extent of access to some medicinal plants by the respondents;
- (iii) ascertain the extent of use of some medicinal plants by the respondents; and
- (iv) identify perceived reasons for use of medicinal plants in the study area.

### **Statement of Hypotheses**

The following null hypotheses were stated and tested

Ho<sub>1</sub>: There is no significant difference between access and use of medicinal plants by the respondents in the study area.

Ho<sub>2</sub>: There no significant relationship between access and use of medicinal plants by the respondents in the study area.

### **Methodology**

The study was conducted in Abia State. The State is located on Latitudes 40° – 70° N of Equator and 7° – 8° E of Greenwich Meridian (Leo and Chukwu, 2013). It has total land mass of about 5833.77km<sup>2</sup> with a population of 2,833,999.00 persons (1,434,193.00 male and 1,399,806.00 female) with a population density of 486 persons per km<sup>2</sup> (National Population Commission, 2007). The State is equally located in the Rain Forest Ecological Zone of Nigeria. It is divided into three Senatorial Zones namely; Abia North, Abia Central and Abia South which are further divided into seventeen Local Government Areas (Leo and Chukwu, 2013).

The study which made use of survey design generated its primary data via questionnaire. A sample size of 120 respondents was generated via a multistage method through the use of simple random technique. In the first stage the 3 Senatorial Zones of Abia State, were purposively selected. In the second stage, 2 Local Government Areas (LGAs) were each randomly selected from the three Senatorial Zones to give a total of six LGAs. In stage three through another random method two communities were selected from each of the 6 LGAs to give a total of 12 communities. In the 4<sup>th</sup> and final stage 10 respondents were selected randomly from each of the 12 communities to give a total of 120 respondents that were used for the study. Data were analyzed via the use of frequency, percentage and mean and Z-test model.

## **Results and Discussion**

### **Commonly used medicinal plants for preventing and curing some common ailments in the study area**

Table 1 shows that 60% of the respondents used aloe vera leaves to treat diabetes, tooth ache and wound cut, all (100%) the respondents used scent leave juice and bitter leaf to treat diabetes, diarrhea and de- worming. About 90 % of the respondents used paw- paw leaves, neem leaves and barks, lemon grass leaves and guava leaves to treat malaria, typhoid fever and diabetes respectively. Results further show that about 95 % of the respondents used utazi leaves & stem for diabetes & stomach ache while all (100%) the respondents used uziza leaves and seeds on women that newly gave birth. About 90 % of the respondents used Awolowo leaves on wound cuts and stomach ache. Table 2 further shows that 90 % of the respondents used citrus fruit juice for weight reduction and as de-wormer for children and 80 % of the respondents used mango leaves & bark in the treatment of malaria & typhoid fever, while 95 % used pineapple fruit barks for immunity booster, typhoid fever, malaria, asthma & diabetes. Results equally show that 70%, 65% & 60% of the respondents used ehuru seeds, uhriokrihio seeds and alligator pepper seeds to treat stomach ache & fever, cold, fever, catarrh and cough, asthma, arthritis & cold respectively. Results further show that 70%, 75%, 80% and 60% of the respondents used garlic, ginger, uda plant flower and Okpete plant stem respectively to treat cough & catarrh, cough & catarrh & nasal problems, on women after birth and for overweight reduction and for mental / spiritual problems respectively. Results also show that 60, 70, 65, and 50 % of the respondents used hibiscus plant leaves, avocado pear fruit seed, ogirisi,

castor oil plant, and sour sap fruits & leaves to treat hypertension & diabetes, high blood pressure, diabetes, typhoid fever, arthritis & malaria, de wormer & running stomach and cancer, tumor, malaria & typhoid fever respectively (Table 1).

**Table 1: Distribution of respondents according to some medicinal plants used for preventing and curing some illnesses in the study area (n=120)**

Plants	Botanical names	Ailments	Percentage (%)	Remarks
Aloe vera leaves	Aloe barbadensis mill	Diabetes, tooth ache & fresh cut treatment	60	Not an indigenous plant (domesticated plant)
Scent plant leaves juice	Pelargoniumzonale (L)	De- wormer, diabetes & fresh cut treatment	100	Grows in the wild & also domesticated (indigenous plant)
Bitterleaf plant leaves & juice	VernoniaamygdalinaDelile	De wormer, diarrhea and diabetes	100	Grows in the wild and also domesticated (indigenous plant)
Paw paw leaves	Caricapapay (L)	Malaria, typhoid fever & diabetes	90	Grows in the wild and also domesticated (indigenous plant)
Dongoyaro Neem plant leaves & bark	Azadirachitaindica	Malaria & typhoid fever	90	Grows in the wild and also domesticated (indigenous plant)
Lemon grass plant leaves	CymbopagenCitratsstapt	Malaria & typhoid fever	90	Grows in the wild and also domesticated (indigenous plant)
Guava plant leaves	Psidiumguajava	Malaria & typhoid fever	90	Grows in the wild and also domesticated (indigenous plant)
Utazi plant leaves & stem	GongroneraLatifolium	Diabetes & stomach ache	95	Grows in the wild and also domesticated (indigenous plant)
Uziza plant seeds & leaves	Peperguineensis	Used by women after giving birth & stomach ache	100	Grows in the wild and also domesticated (indigenous plant)
Awolowo plant juice	Chromolenmodorata	Used on fresh cuts & stomach ache	95	Not an indigenous plant and grows in the wild
Citrus plant fruit juice	Citruc parodist	Weight reduction & de-wormer for children	90	Grows in the wild and also domesticated (indigenous plant)
Mango tree leaves & barks	Mangifera indica (L)	Malaria & typhoid fever	80	Grows in the wild and also domesticated (indigenous plant)
Pine apple fruit barks	Ananas comosus (L)	Immunity booster, typhoid fever, malaria, asthma & diabetes	95	Grows in the wild and also domesticated (indigenous plant)
Ehunu plant seeds	Mondoramyritica	Stomach ache & fever	70	Grows in the wild and also domesticated (indigenous plant)
Uhriokrihio plant seeds	Tetrapleuratetraptera	Cold, fever, catarrh and cough	60	Grows in the wild and also domesticated (indigenous plant)
Alligator pepper plant seeds	Afromomummelegueta	Cough, catarrh, asthma, arthritis & cold	65	Grows in the wild and also domesticated (indigenous plant)
Garlic	Allium sativum (L)	Cough & catarrh	70	Not an indigenous plant to the region (domesticated plant)
Ginger	Zingiber officinale	Cough & catarrh and nasal problems	75	Not an indigenous plant to the region (domesticated plant)
Uda plant flower	Xylopiaaethiopic	Used by women after birth and overweight	80	Grows in the wild and also domesticated (indigenous plant)
Okpete plant stem	Palisota hirsute	Used for mental / spiritual problems	60	Grows in the wild and not domesticated (indigenous plant)
Hibiscus plant leaves	Hibiscus rosinensis	Hyper- tension & diabetes	60	Not an indigenous plant to the region
Avocado pear fruit seed	Persea Americana	High blood pressure, diabetes, typhoid fever, arthritis & malaria	70	Not an indigenous plant to the region (domesticated plant)
Ogririisi Castor oil plant	Ricinus communis	De wormer & running stomach	65	Grows in the wild and not domesticated (indigenous plant)
Sour sap fruits & leaves	Annona muricata	Cancer, tumor, malaria & typhoid fever	50	Grows in the wild and domesticated (indigenous plant)

Source: Feld Survey, 2020. \* Multiple responses

### Extent of access of some herbal medicine

Table 2 shows that out of twenty four medicinal plants investigated upon in the study area, twenty one of them were highly accessible while only three were accessible. This finding is in agreement with that of Oladeji (2016) which noted that the reason why two third of the world's population depend on herbal medicine for primary health care was because of the fact that herbal medicine was culturally acceptable, easily available and affordable.

**Table 2: Distribution of respondents according to their extent of access to medicinal plants (n=120)**

Medicinal Plants	Botanical Names	Extent of Access				Mean	Extent of Accessibility & Ranks
		Highly Accessible	Accessible	Not Accessible	Highly Not Accessible		
Aloe vera	Aloe barboensis mill	10	20	50	40	2.0	Accessible 23 <sup>rd</sup>
Scented leaves	Pelargonium zonale	60	40	20	-	3.3	Highly accessible 12 <sup>th</sup>
Bitter- leaf	Vernonia amygdalina Delile	70	50	-	-	3.6	Highly accessible 4 <sup>th</sup>
Paw-paw leaves & seeds	Carica papaya (L)	80	40	-	-	3.7	Highly accessible 1 <sup>st</sup>
Dongoyaro (Neem plant) leaves & bark	Azadirachta indica	60	40	20	-	3.3	Highly accessible 12 <sup>th</sup>
Lemon grass leaves	Cymbopogon citratus Stapf	60	40	20	-	3.3	Highly accessible 12 <sup>th</sup>
Guava leaves	Psidium guajava	80	30	10	-	3.6	Highly accessible 4 <sup>th</sup>
Utazi leaves & stem	Gongronema latifolium (Gentium africanum)	70	45	15	-	3.7	Highly accessible 1 <sup>st</sup>
Uziza leaves & seeds	Peperomia guineensis	60	30	20	10	3.2	Highly accessible 15 <sup>th</sup>
Awolowo	Chromolaena odorata	70	40	10	-	3.5	Highly accessible 7 <sup>th</sup>
Grape Fruit	Citrus paradisi	60	30	20	10	3.2	Highly accessible 15 <sup>th</sup>
Mango tree leaves & barks	Mangifera indica (L)	85	35	-	-	3.7	Highly accessible 1 <sup>st</sup>
Pine apple fruit bark	Ananas comosus (L)	30	40	30	20	2.7	Accessible 22 <sup>nd</sup>
Ehuru seeds	Mondoromyristica	50	40	30	-	3.2	Highly accessible 15 <sup>th</sup>
Uhiokinhio	Tetrapleura tetraaptera	40	30	30	20	2.7	Accessible 22 <sup>nd</sup>
Alligator pepper seeds	Aframomum melegueta	40	40	40	-	3.0	Highly accessible 21 <sup>st</sup>
Garlic bulb	Allium sativum (L)	60	30	20	10	3.2	Highly accessible 15 <sup>th</sup>
Ginger	Zingiber officinale	75	35	10	-	3.5	Highly accessible 7 <sup>th</sup>
Uda flower	Xylopiya aethiopica	65	45	10	-	3.5	Highly accessible 7 <sup>th</sup>
Okpete	Palisota hirsuta	50	40	20	10	3.1	Highly accessible 20 <sup>th</sup>
Hibiscus plant leaves	Hibiscus rosasinensis	70	40	10	-	3.5	Highly accessible 7 <sup>th</sup>
Avocado pear seeds	Persea americana	70	40	10	-	3.5	Highly accessible 7 <sup>th</sup>
Ogiriisi castor oil	Ricinus communis	80	30	10	-	3.6	Highly accessible 4 <sup>th</sup>
Sour chop (chop-chop)	Annona tamarica	60	30	20	10	3.2	Highly accessible 15 <sup>th</sup>

Source: Field Survey 2020

N/B: The extent of accessibility was categorized as follows: 0.00 - 0.99 = Not accessible, 1.00 - 1.99 = Not highly accessible, 2.00 - 2.99 = Accessible and 3.00 - 4.00 = Highly accessible.

### **Extent of Use of some Medicinal Plants by the Respondents**

Table 3 shows that out of a total of 24 medicinal plants investigated upon in the study area, only four were used at low extent ( $x= 1.00 - 1.99$ ). They are: Aloe vera ( $x= 1.9$ ), Okpete and Hibiscus ( $x= 1.6$ ) respectively and Ogiriisi ( $x= 1.8$ ). Table 4 further shows that eleven of the medicinal plants were used at moderate extent ( $x= 2.00 - 2.99$ ). They include: Mango tree leaves, Pine apple fruit bark and Avocado pear seed ( $x= 2.1$ ) respectively, and Paw-paw leaves ( $x= 2.2$ ). Others include: Sour chop leaves & fruits and Uzizi leaves & seeds ( $x= 2.3$ ) respectively. Uhiokirihiio ( $x=2.4$ ), Awolowo leaves ( $x= 2.5$ ), Ehuru ( $x= 2.7$ ) and Scented leaves ( $x= 2.8$ ) respectively. Table 4 equally, shows that nine out of the 24 medicinal plants were used at high extent ( $x= 3.00 - 4.00$ ). They include Alligator pepper ( $x= 3.00$ ), Uda ( $x= 3.1$ ) and Dongayaro, Citrus fruit, and Garlic ( $x=3.2$ ) respectively. Others include: Bitter- leaf, Lemon and Ginger ( $x= 3.3$ ) respectively and Utazi ( $x= 3.5$ ). The finding from Table 4 indicate that a reasonable proportion (46%) of the medicinal plants were used at moderate extent and 38 % of them were used at high extent, while only a very small proportion (17 %) were used at low extent. This implies, that about 83 % of the total medicinal plants studied were used at either moderately or highly. This corroborates Oladeji (2016) who stated that medicinal plants constitute an effective source of both traditional and modern medicine that about  $\frac{2}{3}$  of the world's population depend on medicinal plants for their primary health care.

### **Respondents' Perceived reasons for using medicinal plants in the study area**

Table 4 shows that the respondents' perceived reasons for using medicinal plants were cost effectiveness and culturally acceptable ( $x=3.0$ ) and ranked 1<sup>st</sup>, easily available ( $x= 2.9$ ) ranked 3<sup>rd</sup>, absence of orthodox medical facilities and high cost of orthodox medicines ( $x= 2.7$ ) and ranked 4<sup>th</sup>, medicinal plants are accepted by the people' religion ( $x= 2.6$ ) and ranked 6<sup>th</sup>, herbal medicines are more natural than the orthodox medicines ( $x= 2.5$ ) and ranked 7<sup>th</sup> and orthodox medicine are more difficult to administer ( $x= 1.7$ ) and ranked 8<sup>th</sup>. These findings are in agreement with that of (Khan, 2002; Owoyale; Olatunji and Oguntoye, 2005 and Oladeji, 2016) which stated that mostly in West African many people patronize TM because of its low cost and benefits, availability, affordability, cultural belief, complementary to modern health care system and absence of orthodox medical facilities.



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**Table 4: Distribution of the respondents according to their perceived reasons for using medicinal plants (n=120)**

Perceived reasons	Strongly Agree	Agree	Disagree	Strongly disagree	Mean	Ranks
Medicinal plants are cost effective	50	30	30	10	3.00	1 <sup>st</sup>
Medicinal plants are culturally acceptable	40	40	40	-	3.00	1 <sup>st</sup>
Medicinal plants are easily available	40	40	30	10	2.90	3 <sup>rd</sup>
Absence orthodox medical facilities in the rural areas	20	60	20	20	2.70	4 <sup>th</sup>
Orthodox medicines are expensive	30	40	30	20	2.70	4 <sup>th</sup>
medicinal plants are accepted by the people' religion	30	30	40	20	2.60	6 <sup>TH</sup>
Medicinal plants are more natural than the orthodox medicines	30	30	30	30	2.50	7 <sup>th</sup>
Orthodox medicines are more difficult to administer	15	35	30	40	1.70	8 <sup>th</sup>

Source: Field Survey, 2020

### Conclusion and Recommendations

The study concluded that the respondents accessed and used medicinal plants due to their being culturally acceptable, minimal cost, availability and adaptability of the herbal medicines. The study, therefore, recommends that Government of Nigeria and that of Abia State in particular should encourage the standardization of herbal medicine since a very reasonable proportion of the citizenry still access and use them to a high extent.

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