http://dx.doi.org/10.22161/ijeab/4.2.18 *ISSN: 2456-1878*

Access of Traditional Medicine for the Treatment of Malaria among Rural Farmers in Abia State, Nigeria

Mbah, G.O.*; Ekweanya, N.M.; Kalu, P.O

Department of Rural Sociology and Extension, Michael Okpara University of Agriculture, Umudike, Nigeria
Corresponding Author*

Abstract— *The study investigated the level of access and utilization of traditional medicine for treatment of malaria among rural households in Abia State, Nigeria. Specifically, the study described socioeconomic characteristics of the respondents; ascertained the level of access to traditional medicine; ascertained the extent of utilization of traditional medicine and determined factors influencing access and utilization of traditional medicine in the study area. Data for the study were collected from (80) respondents using structured questionnaire and analyzed using both descriptive and inferential statistics (Tobit regression). The result showed that 55.0% of the respondents were males, average age of 58.45 years, 81.2% were married and 45.0% had secondary education. The study further revealed that respondents had high access to medicinal plants from market (mean = 2.35) and traditional medical practitioners (mean = 2.36). The respondents highly utilized traditional medicine with grand mean of 2.0. Tobit regression result showed that coefficient of age, years of education, income and farming experience influenced access to traditional medicine at 1% probability level. Coefficients of gender, age, occupation and income at 1%, 5%, 1% and 1% probability level respectively influenced utilization of traditional medicine in the study area. The study concluded that there was moderate access and high utilization of traditional medicine for treatment of malaria in the study area, and recommended ensuring appropriate information on traditional medicine for effective access and utilization.*

Keywords— Access, Traditional Medicine and Rural Farmers.

I. BACKGROUND OF THE STUDY

Traditional medicine refers to health practices, approaches, knowledge and beliefs incorporating plants, animals and minerals based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illness or maintain well-being (WHO, 2002). Traditional medicine variously known as ethno-medicine, folk medicine, native healing or complementary and alternative medicine is the oldest form of health care system that has stood the test of time. It is an ancient culture-bound method of healing that humans have used to cope and deal with various diseases that have threatened their existence and survival (Abdullahi, 2011). Consequently, different societies have evolved different forms of indigenous healing methods that are captured under the broad concept of traditional medicine, example, Chinese, India and African traditional medicines. This explains the reason there is no universally accepted definition of term (Cook, 2009).

The World Health Organization (WHO) defines traditional medicine as the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses (WIPO Publication No. 993). Traditional medicine, according to the World Health Organization (2002) is the sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental or social imbalance, relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or written. There are strong indications that traditional healthcare systems are still in use by majority of the people, not only in Africa, but across the world (Cook, 2009). Examples of traditional healers are herbalists, diviners, faith healers, traditional surgeons, etc. All these traditional healers need information to support their work. Traditional medical practice illustrates the medical knowledge practices, which improved for several

centuries ago within a variety of societies before the era of modern Allopathic or Homopathic Medicine began (Alam, 2011). He went further to say that among non-industrialized societies, the use of herbal medicine to heal diseases is almost universal. People from countries in Latin America, Asia, Africa, even North America are still using herbal products to fulfill their regular health-related necessitates. Adesina (2014) supported Alam (2011) notion by showing that nearly 75-80 percent of the population in Africa uses traditional medicine for their needs. Owing to the fact that traditional medicine is accessible, affordable, culturally acceptable, socially sanctioned and easy to prepare with little or no side effects, most people prefer it to the exorbitantly priced health care services. There are some hazardous side effects of this medication and their limitations in the domain of holistic health, especially in African society.

The effects of poor health go far beyond physical pain and suffering. The combination of high level of poverty, inadequate public health infrastructure and high cost of private health care services have confirmed the larger proportion of both urban and especially the rural populace to patronize traditional medicine. It is estimated that over 70% of West Africans rely on traditional medicine or health care services for treatment on both communicable and non-communicable diseases (WHO, 2012). According to the World Health Organization (WHO), traditional medicine usage for example, up to 80% of people in Africa and Asia use traditional health care services, in China, 50% of total medical consumption and 90% of Germans, 70% Canadians and 60% Swedes have used a natural remedy at some time (WHO, 2008; Hanssen *et al*., 2005).

Traditional medicine is also an affordable source of health in many countries. It is firmly embedded in the belief systems and can be termed culturally compatible (WHO, 2002). In developed countries, higher income and higher education are guiding factors of patient preference for traditional medicine. Due to difficulties in assessing modern health care services, ethnic minorities in developed societies who are disadvantaged both economically and socially, use traditional medicine as first health care choice, making it non-complementary (Bodeker *et al*., 2007). Increase in chronic diseases, awareness about limitations of modern medicine, proven efficacy of traditional medicine systems in selected conditions, emerging interest in holistic preventive health-integrated approach to medical education and increasing awareness among physicians are some of the reasons for renewed interest in traditional medicine (Bodeker *et al*., 2002). Higher quality of care by traditional medicine practitioners have also been reported as an important reason for increasing health seeking and consumer satisfaction of traditional medicine.

II. PROBLEM STATEMENT

Traditional medicine is popular throughout the world. In some Asian and African countries, 80% of the populations depend on traditional medicine, including for primary healthcare (WIPO publication No. 993). Many modern drugs and vaccines are based on natural resources and associated traditional knowledge. Growing commercial and scientific interest in traditional medicine systems has led to calls for traditional medical knowledge to be better recognized, respected, preserved and protected. According to Kleinman (2002), health-seeking arenas can be classified into three: home level, informal and professional sector. Of this home level covers 75% and in every 1000 illness episodes, 750 never get outside of family sector and are managed through household means. The remaining 25% is divided among professional sector, such as hospitals, clinics of biomedicine or western medicine, Chinese medicine, etc. Many simple primary health care problems like fever, upper respiratory tract infections, hepatitis, anaemia, arthritic conditions and certain gynaecological conditions can be managed at household level through simple herbal home remedies (Hariramamurthi *et al*., 2007). The provision of safe and effective traditional medicine therapies could become a critical tool to increase access to healthcare. In 2004, the South African health minister, Manto Tshabalalu Msimang, suggested that the use of African traditional medicines may eventually replace antire trovirals in the treatment of HIV and AIDS (WHO, 2003). There are both benefits and risks associated with the use of traditional medicine. Therefore, it is important to ensure that the appropriate information is made available to the consumers to enable effective utilization which entails maximizing the benefits of traditional medicine while minimizing the risks. This inspired this study which is on access and utilization of traditional medicine among rural households in Abia State, Nigeria.

OBJECTIVES OF THE STUDY

Specifically, the objectives were:

1. describe the socio-economic characteristics of the respondents in the study area,
2. ascertain the extent of utilization of traditional medicine among the respondents,
3. determine the factors influencing level of access of traditional medicine,

http://dx.doi.org/10.22161/ijeab/4.2.18 *ISSN: 2456-1878*

HO_1: There is a significant relationship between some socio-economic characteristics of the respondents and utilization of traditional medicine.

III. METHODOLOGY

The study was conducted in Abia State, Nigeria. Abia State is located within latitudes 400N – 470 N of equator and longitude 70 – 80E of the Greenwich Meridian NRCRI, 2010). The state has a total land area of about 5,410sq kilometers, with a human population of about 2,881,380 (NPC, 2017). Abia State shares a common boundaries with Rivers State in the South, Imo in the West, Ebonyi and Enugu States in the North and Akwa Ibom and Cross River States in the East. Abia State is made up of 17 Local Government Areas (LGAs) and three agricultural zones namely Aba, Ohafia and Umuahia. Most people especially the rural dwellers are engaged in subsistence farming, producing such arable crops as cassava, yam, cocoyam, maize, vegetables, melon, banana/plantain sweet potatoes and rice.

Methodology

The study was conducted in Ohafia agricultural zone in Abia state, Nigeria. Bende and Ohafia LGA lies between co-ordinates latitude 5.617° North and longitude 7.833° East. They has about 245,987 thousand people (population census, 2006). Bende and Ohafia L.G.A are among the Local Government Areas that make up the seventeen (17) L.G.A of the State (FRN, 2007; NPC, 2006), among which 128,074 people are females and 64,034 are males, according to the NPC State and Local Government Census figure. The major occupation of this people is farming, with other occupations like civil services, and businesses. It is a low-land with a heavy rainfall of about 2,400mm between May and October, which favors agricultural activities. The average annual temperature is 26.1° and the average annual rainfall is 2147mm. These Local Government Area are blessed with several inland water channels and seasonal run-offs. It has a tropical climate with average temperature of 7.20c from January to April and over 21.10c from September to December. The great variety of plants in these L.G.A reflects its rich soil and topography. Major food and cash crops produced include cassava, yam, plantain and oil palm. Other economic activities engaged by the people include, handcrafts and petty businesses. (Abia Bulletin, 2006). Objectives and 1, 2 and 3 were analyzed with descriptive statistics such as frequency, percentage. While the Hypothesis was realized using Tobit regression model,

MODEL SPECIFICATION

The model for the mean decision used in this work is specified thus:

$$\overline{X} = \frac{\sum fx}{n}$$

Where,

$\sum$ = Summation of the frequencies

Xs = Assigned scores to different categories

n = number of sample

$\overline{X}$ = Arithmetic mean

Hypothesis 1 were analyzed using Tobit regression estimates/model which is specified thus:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7 \ldots Xn, e)$

Tobit model expressed thus;

$1_i = B^T X + e_i \ldots\ldots\ldots\ldots\ldots\ldots(1)$

Y_i = if 1 = T

Where,

Y_i = represent a limited dependent variables which simultaneously measures the level of access and utilization of traditional medicine.

T = observed threshold

1^x = the underlying content variables indexing the levels of access and utilization

Xi = the vectors of independent variables

X1 = Age of respondents (years)

X2 = marital status (married = 1, single = 0)

X3 = level of education (number of years spent in school)

X_4 = Gender (male = 1, female = 0)

X_5 = Occupation

X_6 = Household size (number of persons)

X_7 = Income (measured in naira from major occupation)

E = error term

Variable	Frequency (n = 80)	Percentages	Mean
Gender Male	44	55.0	
Female	36	45.0	
Age			
20-30	4	5.0	
31-40	12	15.0	
41-50	24	30.0	
51-60	37	46.25	

http://dx.doi.org/10.22161/ijeab/4.2.18 *ISSN: 2456-1878*

61-70	3	3.75	58.45 years
Marital status			
Single	15	18.8	
Married	65	81.2	
Educational attainment			
No Formal Education	11	13.7	
Primary Education	17	21.2	
Secondary Education	36	45.0	
Tertiary Education	16	20.0	
Household size			
1-3	7	8.75	
4-6	40	50.0	
7-9	26	32.5	
10 -12	7	8.75	6 person
Household farm size			
0.5 -1.0	19	23.8	
1.1 - 1.5	40	50.0	
1.6 - 2.0	12	15.0	
2.1-2.5	9	11.25	2.1 hectares

The distribution of respondents according to gender was presented in Table 1. The results showed that majority (55.0%) of the respondents were male while 45.0% were females.

1.2 Age

The distribution of respondents based on their age was shown in Table 1. The result showed that about 46.25% of the respondents were within the age ranges of 50 – 60 years, 30.0% were within the age ranges of 41 – 51 years, 15.0% were within 31 – 40 years, 5.0% were within 21 – 30 years while 3.75% were within age ranges of 61 – 70 years. The result further showed a mean age of 58.45 years indicating the respondents were relatively old but still active..

1.3 Marital status

The marital status of the respondents in the study area was presented on Table 1. The result showed that majority of the respondents (81.2%) were married while 18.8% were still single. This result implied that married people accessed and utilized medicinal plants more than tv here single counterparts.

1.4 Educational attainment

The result on the educational attainment of the respondents showed that majority (45.0%) of the respondents had secondary education. The result further revealed that 21.2% had primary education, 20.0% had tertiary education while 13.7% had no formal education. The result implied that most of the respondents were educated and have good knowledge of medicinal plants.

1. 5 Household size

Majority (50.0%) of the respondents had 4 – 6 persons in their households. Furthermore, 32.5% had 7 – 9 persons in their household while 8.75% of the respondents had 1 - 3 and 10 -12 persons in their household. The result also show an average number of 6 persons in household size of the respondents in the study area. The result implied that there was relatively a large household size in the study area which provides the needed labour to their households.

1.6 Farm size

The distribution of respondents in the study area based on the farm size was shown in Table 1. The result showed that majority (50.0%) of the respondents had farm size of 1.1 – 1.5 hectares. The result further showed that about 23.8% had 0.5 – 1.0 hectares, 15.0% had 1.6 – 2.0 hectares while 11.25% had 2.1 – 2.5 hectares. With an average farm size of 2.1. The result implied that respondents had small farm sizes in the study area.

1.7. Income

The distribution of respondents based on their income was shown in table 1. The table showed that the average income of the respondents was ₦168,398.5 indicating that on the average, the respondents earned small income annually from their livelihood/farming activities hence most of the respondents were farmers. Furthermore, the result revealed that majority (43.7%) of the respondents earned ₦ 201,000- ₦ 300,000 annually, about 15.0% earned ₦301,000- ₦400,000 annually, while 12.5% and 11.2% earned ₦10,000 – 100,000 and ₦401,000-500,000 annually respectively.

1.8 Farming experience

http://dx.doi.org/10.22161/ijeab/4.2.18 *ISSN: 2456-1878*

The distribution of respondents based on their farming experience was showed in table .1. The result revealed that majority 83.8% of the respondents had farming experience of 11 – 20 years. About 11.0% had farming experience of 21 – 30 years while 5.0% had 1 – 10 years of farming experience. The average years of farming experience was 15.94 years. This result implied that the respondents were well experience in farming activities and is therefore more likely to be aware of a lot of medicinal plants.

1.9 Membership to agricultural organization

The result of membership to agricultural organizations showed that the majority (52.5%) of the respondents were members to agricultural organization in the study area while 47.5% were not. Membership to agricultural organization will definitely influence the respondent's awareness, access and utilization of medicinal plants in their location.

1.2 LEVEL OF ACCESS TO TRADITIONAL MEDICINE

Table.1.2: Distribution of the respondents based on their level of access to medicinal medicine

Level of access	Sum	Std Dv	Mean	Rank
Buying from the market	188	0.57589	2.35	2nd
From the bush	158	0.77908	2.00	3rd
From traditional medicine	189	0.71589	2.36	1st
From native doctor	95	0.50551	1.19	5th
Friends / Family	155	0.75211	1.94	4th
Total mean			9.81	
Grand mean			1.96	
Benchmark mean			2.00	

Source: *Field survey, 2016.*

The result in Table 1.2 showed the distribution of the respondents based on their level of access to medicinal plants in the study area. The result revealed that generally, respondents had moderate access to medicinal plants in the study area. Furthermore, the result showed that that the respondents had access to medicinal plants from traditional medicine (mean = 2.36), buying from the market (mean = 2.35), and from the bush (mean = 2.00). This result implied that the respondents accessed medicinal plants from various sources. A large proportion of Nigerians, especially those living in rural areas continue to patronize traditional medicine because traditional healers are considered successful in curing a number of illnesses (Mafimisebi and Oguntade, 2010).

1.3 Determine the factors influencing level of access of traditional medicine

Table.1.3: Distribution of the respondents based on the determination of the factors influencing level of access of traditional medicine

Problems	Frequency	Percentages
Poor and inadequate medical facilities.	53	66.2
Limited access and use of these medicines.	37	46.2
Poor quality assurance	25	31.2
There are very few practitioners in area.	55	68.8
The practitioner is not easily accessible.	35	43.8
There are very few healers in attendance.	54	67.5
The drugs have no dosage	52	65.0
Drugs are not usually available.	28	35.0
There is no provision from practitioners to visit very sick patient at home.	41	51.2
High transport cost to traditional healers.	51	63.8
Traditional healers are not well trained or skilled	42	52.5
Lack of knowledge and ignorance	43	53.8
Traditional healers are not well trained/ skilled.	38	47.5
Unhygienic nature of traditional medicine.	44	55.0
At times they are out of reach of patients.	37	46.2

Source: Field survey, 2016

http://dx.doi.org/10.22161/ijeab/4.2.18 *ISSN: 2456-1878*

***Multiple responses recorded**

Table 1.3 showed the distribution of the respondents based on the problems associated with traditional medicine in the study area. The result showed that the respondents perceived some challenges associated with medicinal plants. These challenges were that there are very few practitioners in area (68.8%), very few healers in attendance (67.5%), poor and inadequate medical facilities (66.2%), drugs have no dosage (65.3%), high transport cost to traditional healers (63.2%), unhygienic nature of traditional medicine (55.0%), lack of knowledge and ignorance (53.8%), traditional healers are not well trained or skilled (52.5%) among others.

1.4 HYPOTHESES TESTING

Table.1.4: Regression estimates of the relationship between socioeconomic characteristics of the respondents and level of access to medicinal plants in the study area

Variables	*Parameters*	Estimate	Std. Error	t- values
Age	X_1	.043	.026	2.751***
Gender	X_2	.129	.488	.069
Marital	X_3	-.915	.918	.993
Years of education	X_4	.620	.152	16.573***
Household size	X_5	.029	.124	.054
Farm size	X_6	-.601	.200	0.038
Occupation	X_7	.321	.817	.154
Income	X_8	-5.203E-6	.000	-3.844***
Farming experience	X_9	0.750	.027	7.993***
Pseudo R-Square		0.652		
-2 Log Likelihood		413.528		
Chi-Square		221.951***		

Keys: * indicates significant at 1%**

Table 1.4 showed Tobit regression estimate of the relationship between selected socioeconomic characteristics and level of access to medicinal plants in the study area. The Pseudo R-Square of 0.750 indicated that 75.0% of the variations in the dependent variable were accounted for while others were due to error. The chi-square value was statistically significant at 1% level of probability indicating the Tobit regression line of best fit. The coefficients of age, years of education, income and farming experience influenced the intensity of access to medicinal plants in the study area.

The coefficient of age was statistically significant at 1% level of probability. This result implies the older person had high intensity of access to medicinal plants as age increases with level of access. The coefficient of education was statistically significant at 1% level of probability. This result implies that increase in level of education will lead to a corresponding increase in the intensity and probability of access to medicinal plants. The coefficient of income was statistically significant at 1% level of probability and negatively related. This inverse relationship implies that increase in level of education will lead to a corresponding decrease in the intensity and probability of access to medicinal plants. The coefficient of farming experience was statistically significant at 1% level of probability and positively related. This result implies that increase in farming experience will lead to a corresponding increase in the intensity and probability of access to medicinal plants. The study therefore rejected the null hypothesis which stated that there is no significant relationship between some socio-economic characteristics of the respondents and access to traditional medicine and concluded otherwise.

IV. CONCLUSION AND RECOMMENDATIONS

The study concluded that there was moderate access to traditional medicine in the treatment of malaria in the study area. It is therefore important to ensure that the appropriate information is made available to the consumers to enable effective utilization which entails maximizing the benefit of traditional medicine while minimizing the risks. From the problems associated with traditional medicine is the problem of very few practitioners in the area, poor and

inadequate medical facilities, drugs have no dosage, unhygienic nature of traditional medicine and lack of knowledge and ignorance, Proper orientation should be carried out such as workshop training, public enlightenment and radio advert, for the safety of natural drug utilization to that of chemical drugs utilization as well as encourage access to traditional medicine.Women and youths should be encouraged to access traditional medicine in the treatment of malaria.

REFERENCES

[1] Abdullahi, A.A. (2011). Trends and challenges of traditional medicine in Africa: *Africa journal of traditional, complementary and alternative medicines (AJTCAM)*. 8(5).

[2] Adesina, S.K. (2014). Traditional medicine care in Nigeria: online Nigeria daily news. Accessed on: 29 February 2016 at www.onlinenigeria.com

[3] Bodeker, A. and Gemma B. (2005). Traditional, complementary and alternative medicine policy.

[4] Bodeker, G. (2001). "Lessons on integration from the developing world's experience," *British medical journal*. 3(22): 164- 167.

[5] Bodeker, G. (2007). "Medicinal plant biodiversity and local health care: rural development and the potential to combat priority diseases,' in B. Haverkort, and S. Rist eds., *Endogenous Development and Biodiversity, compass, Leusden*. Pp.241- 255.

[6] Bodeker, G. and Burford G. (2007). Traditional, complementary, alternative medicine policy and public health perspective. Imperial College Press. London.

[7] Bodeker, G. and Kronenbreg, F. (2002). "a public health agenda for traditional, complementary and alternative medicine." *America journal of public health*. 92(10): 1582-1591.

[8] Bodeker, G., Kroneberg, F. and Burford, G. (2007). Policy and public health perspectives on complementary and alternative medicine policy and public health perspective, Imperial College Press (b). Pp. 9-38.

[9] Cook, C.T. (2009). Sangomas: problem or solution for south Africa's health care system. *Journal of the national medical association*. 101(3): 262-267.

[10] Intellectual property and genetic resources, traditional knowledge and traditional culture expressions: an overview (WIPO publication no. 933), www.wipo.int/export/sites/www/tk/en/publications/933e booklet 1.pdf.

[11] Kayne, S. (2009) Introduction to traditional medicine, a global perspective. Pharmeceuttical Press, London, United Kingdom.Retreaved from http://www.Pharmpress.com/flies/docs/sample%20chapter%282%29 pdf.

[12] Krige, D. (2014). Traditional medicine and healers in south Africa. The Journal of the European medical writers association. Accessed from www.emwa.org/journalarticles/JA-V7-111krigepdf. on 1 march 2016.

[13] Haariramamurthi, G.P. Venkatasubramaniam, P.M. and Unnikrishnan, D.S. (2007). "Home herbal gardens – A novel security strategy based on people's knowledge and resources" in Gerard bodeker and gemma burford eds., traditional, complementary and alternative medicine policy and public health perspectives, imperial college press. Pp. 167- 184

[14] Promoting access to medical technologies and innovation: intersection between public health, intellectual property and trade (WIPO publication no. 628), www.wipo . int/export/sites/www/free publication/en/globalChallenges //628/wipo _ pub _ 628.pdf a series of briefs, www. Wipo. Int/tk/en/briefs. Html. See WHO fact sheet N 134 "traditional medicine"(December 2008).

[15] World Health Organization (2003) "Traditional medicine ", fact sheet No. 134 2008.

[16] World Health Organization (2006) General Guidelines for methodologies in research and evaluation of traditional medicine, Geneva, Switzerland.

[17] World Health Organization (2008 General Guidelines for methodologies in research and evaluation of traditional medicine, Geneva, Switzerland