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Utilisation of herbs for health treatment among rural dwellers in Oyo and Osun states, Nigeria

[1]Olawuyi, T. B., [1]Ayanwuyi, E., [1]Tiamiyu, A. O., [1]Adewumi, K. A., [1]Oyedele, T. C., [1]Oladipo, S. O. and [2]Ajiboye, B. O.

[1]Department of Agricultural Extension and Rural Development, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

[2]Department of Forest Resources Management, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

Abstract - There has been a lot of criticism and attack against the use of herbal medicine, that it is fetish, the dosage is not measurable and that the practitioners are illiterate. This study therefore examined the level of utilisation of herbs for health treatment among rural dwellers in Oyo and Osun state, Nigeria. Multistage sampling technique was used to select 164 respondents in the study area. Purposive selection of three local government areas (LGAs) from Ogbomoso agricultural zone of Oyo state, while two local Government Areas were purposive selected from Iwo agricultural zone of Osun State. Data for the research was collected using structured interview schedule. Descriptive statistical tools such as frequency counts, percentages, Weighted Mean Scores (WMS), rankings and standard deviation were used to describe the socio-economic characteristics while Chi square and Pearson Product Moment Correlation (PPMC) were employed as the inferential statistical tool to determine relationship between the variables examined at 5% significance level. The study revealed that mean age of the respondents was found to be 51 years. The mean year spent in school was 10 years, while the mean year of herb experience was 25 years. The constraints associated with the utilisation of herbs were Irregular dosage and measurement (WMS=1.44) were ranked 1st, while taste with (WMS=0.97) was ranked least (9th). The result of the Chi-Square revealed that there is significant relationship between the selected socio-economic characteristics of respondents and the level of herbs utilisation for health treatment which include, Religion ($x = 47.262$, $p = 0.000$), Marital Status ($x = 292.625$, $p = 0.000$). Conclusively, it was observed that malaria was the most common disease treated by the respondent therefore, there must be a policy regulating the dosage of herbs to be used for each ailment and age grade of patient. Herb producers should endeavor to process herbs in an attractive environment and acceptable form for the end users.

Keywords: Utilisation, herbs, health, rural dwellers.

INTRODUCTION

Herbal medicine, also known as botanical medicine, a phytotherapy, is the use of plants extracts for medicinal purposes. It has been used for thousands of years in various cultures around the world, many modern medicines have their roots in herbal medicine (Yuan, 2016). Herbal medicines can be prepared in different forms, such as teas, tincture, capsules or creams. They are often used to treat a wide range of ailments/diseases such as malaria, cough, heart disease and many more. Some herbs may also have anti-inflammatory, antimicrobial or antioxidant properties (Wachtel-Galor and Benzie, 2011).

It is worthy of note that, herbal medicine has been defined differently by various people. According to Lucas (2010) herbal medicine is the use of plant products to treat or prevent ailment. Nsowah-Nuamah *et al.,* (2010) suggests that the treatment of ailment using herbal usually takes the form of herbs, and plant preparations. The World Health Organization (WHO) likewise defined herbal medicine as a plant-derived material or preparation with therapeutic or other human health benefits which contain either raw or processed ingredients from one or more plants (WHO, 2010).

Plant resources have remained an integral part of human society throughout history. Herbal medicine is generally considered highly available and accessible to people in developing countries (Ariyo, 2018). This high use of herbal medicines may be due to accessibility, affordability, availability and acceptability of traditional medicines by a majority of the populace in developing countries (Elvin-Lewis, 2000). Consequently, poor and marginalized people are commonly assumed to be most reliant on traditional medicine for their healthcare (Cunningham *et al.,*2008). Long time ago, in traditional societies, herbalism was a way of life rather than a trade as it later turned out to be. If a person fell sick, the other person who knew just what to use went to the nearby bush and brought back herbs that gave relief to the sick (Ogunkunle and Ashiru, 2011). There has been a lot of criticism and attack against the use of herbal medicine, that it is fetish, the dosage is not measurable and that the practitioners are illiterate, the main purpose of this study was to assess the utilisation of herbs for the treatment of ailment among the rural dwellers in Oyo and Osun State.

The specific objectives are to:

1. Described the socio-economic characteristics of rural dwellers on utilisation of herbal medicine
2. Examined the level of uses of herbal medicine for health treatment
3. Identified the types of herbs used for different diseases treatment in study area.

METHODOLOGY

The study was carried out in two states Oyo and Osun State of Nigeria. Oyo state was created on February 3, 1976, which is located between latitudes 20381 and 40351 east of the Greenwich meridian. The State covers an area of 28,454 square kilometers

(FOS, 1996). According to NPC (2006), Oyo State had a population of 5,591,585 people. The State has two distinct ecological zones – the western moist forest to the south and the intermediate savannah to the north. The State shares border with the people Republic of Benin in the west, Kwara State in the north, Osun state in the east and Ogun State in the south. The State is divided into four agricultural zones. These are Ibadan/Ibarapa, Oyo, Ogbomoso and Saki agricultural zones. Agriculture is the main occupation of the people and small-scale traditional farming system predominates in the area. The major cash crops cultivated in the area are yam, cassava, cocoa and maize and many more, the major occupation of the people in the area is farming and they are Yoruba tribes. Wikipedia, (2024).

Also, Osun State was established on 27th day of August 1991 as a result of bifurcation of the former Oyo State. Osun State is located in the South-Western part of Nigeria. It covers an area of approximately 14,875 square kilometers and an estimated population of 4,137,627 (National Popolation Census). It also lies between longitude 04 0^0E and latitude 05 558^0N and is bounded by Ogun, Ekiti, Kwara, Oyo, and Ondo States in the South, North, West, and East respectively, (Osun State in brief 2007). The inhabitants are mostly Yorubas, though other tribes do co-exist in Osun State. The major occupation of these people is farming and crops cultivated include yam, cassava, cocoyam, cocoa, oranges, kolanut, plantain and other tree crops which are typical of rain forest zones. Osun State is largely agrarian, and agriculture is the mainstay of the state economy. It employs 75% of the state working population. The State is the one of largest producers of Rice, Kolanut, Oil palm, and Cocoa in the country. Wikipedia, (2024).

The data for this study was obtained from primary source through the administration of a well-structured interview schedule. The schedule is divided into sections which are designed in line with the objectives of the study.

Multistage sampling technique was used to select 164 respondents in the study area. Purposive selection of three local government areas (LGAs) from Ogbomoso agricultural zone of Oyo state, while two local Government Areas Were Purposive selected from Iwo agricultural zone of Osun State.

RESULT AND DISCUSSION

Socioeconomic characteristics

Age - The result of the analysis of the age of household members presented in Table 1 shows that 48.5% of the respondents were above 51 years of age, while 7.0% of the respondents were less than or equal to 30 years of age. The mean age of the respondents was revealed to be 51.1 years. The mean age of the respondents in the two states was to be middle aged is an indication that rural dwellers that utilise herbal medicine in the study areas are in their active age and can utilise herbal medicine exploited optimally. This result agrees with the findings of Nzeh *et al*, (2008) and Akanni, (2013) who cited in their study that those using herbal medicine were middle-aged people who have various family responsibilities.

Table 1: Distribution of respondents according to their age

Age (Years)	Frequency	Percent	WMS
≤ 40	46	22.0	
41-50	29	23.3	51.09
51-60	36	48.5	
61-70	36	48.5	
71-80	17	22.0	
Total	164	100	

Source; Field survey, 2024
WMS: Weighted mean score

Sex - The result on sex of rural households presented in table 2 shows that, slightly more than half 56.3% of the herbs users were males and 43.8% of them were females. This is an indication that both male and female were involved in the use of local herb, though it is dominated by males. This implies that both sex is health conscious and give regard to herb utilisation, and this could be attributed to the respective family custom they belong to.

This result is in line with the findings of Ayanwuyi (2013), where more than half (56.3%) of the forest users in which herb is one of the forest products were males. This result is also in line with Shehu and Mallam, (2007) who indicated that the utilisation of herbal medicine is not gender sensitive as health is the foundation of all other aspects of life and the ultimate aim of any medical service is to reduce mortality and morbidity of people regardless of their sex.

Table 2: Distribution of respondents according to their gender

Gender	Frequency	Percentage
Male	92	56.3
Female	72	43.7
Total	164	100

Source: Field survey, 2024

Marital status - The result on marital status of the households' size shows that 73.1% of the respondents were married, while 0.6% were separated. The findings therefore imply that majority of the respondents were married, which suggests that most of the respondents were responsible. Majority (73.1%) of them were married and they need to provide for the needs of their household which includes health care. According to Akinbile (2007), marriage confers responsibility therefore health case within the family setting is expected to be better as it provides opportunity for members to be their brothers' keepers because non-married individuals may not be sufficiently sensitive to their health needs. This result is an indication that respondents in the study area were responsible individuals who respect the culture and tradition of the social institution.

Table 3: Distribution of the respondents according to their marital status

Marital Status	Frequency	Percentage
Married	121	73.1
Single	12	7.5
Separated	1	0.6
Divorced	5	3.1
Widow	25	15.6
Total	**164**	**100**

Source; Field survey, 2024

Usage of herbs for health treatment - The result on the usage of herbs for health treatment on rural households presented in table 4 revealed that almost all (96.3%) the respondents are using herbs for treatment, while 3.7% of the respondents were not using herbs for treatment. The finding indicates that majority of the respondents are using herbs for treatment. Based on the responses obtained from the respondents, this work affirms the assertion of (Osemeobo *at el*., 2005), that more than 90% of Nigerians in rural areas and over 40% in urban areas depend partly and wholly on traditional medicine. In addition to the fact that millions of people depend on medicinal plants for health treatments.

Table 4: Distribution of respondents according to usage of herbs for health treatment

Do you use herb to treat yourself	Frequency	Percentage
Yes	159	96.3
No	5	3.7
Total	164	100

Source; Field survey, 2024

Types of herbs used for difference diseases treatment in study area - It was revealed that almost all (99.6%) of respondents used neem tree and lemon tree for malaria treatment, 90.0% used bitter leaves for diarrhea treatment, 73.8% used pawpaw and lemon grass for typhoid treatment, 72.5% used miracle leave and honey for ulcers treatment, 70.6% used miracle leaf for asthma treatment, 68.1% used ackee apple and goat weed for headache treatment, 67.5% used blood leave, pap and spoilt plantain for body pain 66.9% used bitter kola for cough, 59.4% used bitter melon and spring onion for urinary infection treatment, 56.9% used miracle leave and scent leave for infertility treatment, 56.1% used spring onion and bitter lemon for gonorrhea treatment, 55.0% used brimstone and bitter lemon for pile treatment, 44.4% used jathropha leave and guinea pepper for hypertension treatment, 42.5% used stonebreaker and itakun for rheumatism treatment, 38.1% used tobacco for convulsion treatment. Medicinal plants are important for a number of reasons such as treatment of various diseases, collection and processing of medicinal plants which provide employment and income opportunities for a large number of people in rural areas (Marshall, *et al.*, 2003), also the importance of traditional medicinal plants in conservation of biological diversity also merits attention (Okoil, *et al.*,) and (Mensah 2007). Therefore, this finding is in line with the research work of Osunderu (2017), where Eeru, Oruwo, and Dongoyaro were listed as medicinal plants used in the treatment of disease. A large proportion of the

world's rural population depends on these plants for their health care needs (Largo, 2014).

Table 5: Distribution of respondents based on types of herbs in the study area, n=164

Plant	Local name	Oyo F(%)	Osun F(%)	Pooled F(%)
Neem tree, lemon tree, tea tree	Dongoyaro, Oronbo, ewe tea	100(98.0)	59(95.2)	59(99.6)
Bitter kola	Orobo	68(57.8)	42(67.7)	90(66.9)
Miracle leaf	Ewe abamonda	59(57.8)	32(51.6)	91(70.6)
Brimstone, bitter lemon	Oruwo,	70(68.6)	47(75.8)	117(55.0)
Bitter leave	Ewuro	91(89.2)	56(90.3)	147(90.0)
Jatropha leave, guinea pepper	Lapalapa, ero awonka	47(46.1)	26(41.9)	73(44.4)
Pawpaw leave, lemon grass	Ewe ibepe, koriko oba	79(77.5)	43(69.4)	122(73.8)
Stone breaker, climb tree	Ewe eyin olobe, itakun	47(46.1)	24(38.7)	71(42.5)
Ackle apple, goat weed	Ewe isin, ewe imi-esu	66(64.7)	45(72.6)	111(68.1)
Bitter lemon	Ewe ejirin	64(62.7)	34(54.8)	98(59.4)
Scent leave, miracle leave	Efinrin, ewe abamonda	56(54.9)	39(62.9)	95(56.9)
Spring onion	Alubosa elewe	58(56.9)	29(46.8)	87(56.1)
Miracle leave	Ewe abamonda	74(72.5)	46(74.2)	120(72.5)
Tobacco leave	Ewe taba	41(40.2)	22(35.5)	63(38.1)
Blood leave, spoilt plantain	Ewe aje, Ogede rira	64(62.7)	46(74.2)	110(67.5)

Source: Field Survey, 2024

Level of uses of herbal medicine for health treatment

It was revealed that, malaria diseases (aarun iba) being treated with neem tree, tea tree, pineapple and mango leave and was ranked first based on the level of use of herbal medicine with weighted mean score(WMS=2.16), body pain (ara riro)treated with ewe aato, dog bone, eko tutu, spoilt plantain and ori was ranked second with (WMS=1.97), Other herbal medicine based on the level of use in their ranked order include pile(jedijedi) treated with efinrin,oruwo, asunwon and bara was ranked third with(WMS=1.92), diarrhea(igbe gbuuru) treated with ewuro and ewe laali was ranked fourth with (WMS=1.80), headache(ori fifo) treated with ewe isin and ewe imi esu was ranked fifth with(WMS=1.79), cough(iko) treated with igi ipeta,lime and eru awola was ranked 6th with(WMS=1.78), convulsion(ile tutu/giri) treated with ewe taba(dry and wet), black alum and ororo maalu(egunnugo) was ranked 7th with(WMS=1.63), typhoid(iba jedojedo) treated with ewe ibepe, koriko oba and lime was ranked 8th with(WMS=1.54), gonorrhea(atosi) treatd with ewe ipeta, alubosa elewe, lime and bara epa ikun was ranked 9th with(WMS=1.52), ulcer(ogbe inu) treated with red lapalapa, white lapalapa, ewe owu and honey, and infertility(airomobi) was ranked 10th respectively with(WMS=1.48), hypertension(eje riru) treated with lapalapa, ewe laa and eru awola was ranked 11th with(WMS=1.46), asthma treated with ewe abamonda and lime was ranked 12th with(WMS=1.44), rheumatism treated with ewe eyun and itakun was rank 13th with(WMS=1.43), hernia(ipake) treated with itagiri, ewe aji ewu, pandoro and lime was ranked 14th with(WMS=1.40), toothache(eyin riro) treated with coconut bark and urinary infection(ito akoran) treated with ewe owu, imo ope, bara and alubosa elewe ranked 15th respectively with (WMS=1.39), while epilepsy (warapa) treated with dry taba, lizard and urine ranked least with(WMS=.1.26). This implies that malaria is the most common disease treated with traditional medicine by the rural dwellers and corroborates the findings of WHO (2012), that Nigeria is one of the six highest malaria burdened countries in Africa which account for an estimated 47% of malaria cases globally and also Chan (2008) which states that 60% of young children in some African countries suffering from high fever, presumably caused by malaria, are treated at home with herbal remedies which are the most common type of traditional medicine. The high incidence of malaria in the community may also be indicative of the fact that majority of the respondents are farmers and the proximity of villages to fields and water sources are some characteristics of agricultural production systems that can create conditions that favor parasitic vectors and facilitate the disease's transmission. This explains why the WHO (2007) stated that most people living in Africa use herbal medicines for the management or prevention of diseases.

Table 6: Distribution of respondents based on level of uses of herbal medicine in Oyo and Osun states

Ailments	Very often F(%)	Often F(%)	Rarely F(%)	Never F(%)	WMS	R	Pooled WMS	R
Malaria (aarun iba)	48(47.1)	35(34.3)	11(10.8)	8(7.8)	2.21	1st	2.16	1st
Cough (iko)	20(19.6)	51(50.0)	29(28.4)	2(2.0)	1.87	4th	1.78	6th
Asthma (iko-fee)	26(25.5)	28(27.5)	27(26.5)	21(20.6)	1.58	10th	1.44	13th
Pile (jedijedi)	33(32.4)	40(39.2)	18(17.6)	11(10.8)	1.93	2nd	1.92	3rd
Diarrhea (igbe-gbuuru)	29(28.4)	38(37.3)	30(29.4)	5(4.9)	1.89	3rd	1.80	4th
Hypertension (eje riru)	21(20.6)	33(32.4)	25(24.5)	23(22.5)	1.51	12th	1.46	12th
Typhoid (iba jedojedo)	34(33.3)	24(23.5)	19(18.6)	25(24.5)	1.66	8th	1.54	8th
Rheumatism(arunmolegun)	29(28.4)	16(15.7)	37(36.3)	20(19.6)	1.53	11th	1.43	14th
Headache (ori fifo)	27(26.5)	38(37.3)	28(27.5)	9(8.8)	1.81	6th	1.79	5th
Toothache (eyin riro)	22(21.6)	26(25.5)	33(32.4)	21(20.6)	1.48	14th	1.39	16th
Urinary infection (ito akoran)	28(27.5)	21(20.6)	27(26.5)	26(25.5)	1.50	13th	1.39	16th
Infertility (airomobi)	27(25.5)	28(27.5)	29(28.4)	18(17.6)	1.63	9th	1.48	10th
Gonorrhea (atosi)	31(30.4)	21(20.6)	26(25.5)	24(23.5)	1.58	10th	1.52	9th
Hernia (ipake)	22(21.6)	25(24.5)	37(36.3)	18(17.6)	1.50	13th	1.40	15th
Epilepsy(warapa)	18(17.6)	32(31.4)	22(21.6)	30(29.4)	1.37	15th	1.26	18th
Ulcers (ogbe inu)	19(18.6)	31(30.4)	34(33.3)	18(17.6)	1.50	13th	1.48	10th
Convulsion (ile tutu/giri)	33(32.4)	31(30.4)	18(17.6)	20(19.6)	1.75	7th	1.63	7th
Body pain (ara riro)	30(29.4)	40(39.2)	21(20.6))	11(10.8)	1.87	5th	1.97	2nd

Source: Field Survey, 2024
F=Frequency
%=Percentage
WMS= Weighted Mean Score
R= Rank

Test of hypothesis

$H_0$1: There is no significant relationship between some selected socio-economic characteristics of rural dwellers and level of herbs utilisation for health treatment

The result of the Chi-Square in the table revealed that there is significant relationship exists between the selected socio-economic characteristics of respondents and the level of herbs utilisation for health treatment which include, Religion (x = 47.262, p = 0.000), the finding therefore indicates that Christians, Muslims and traditional worshipers involved in utilisation of herbs and an implication that the respondents do not have bias towards traditional medicine for health purpose, Marital Status (x = 292.625, p = 0.000), the findings therefore implies that majority of the respondents were married, which suggest that most of the respondents were responsible, According to Akinbile, (2007) marriage confers responsibility therefore health case within the family setting is expected to be better as it provides opportunity for members to be their brothers' keepers, because non-married individuals may not be sufficiently sensitive to their health needs, primary Occupation (x = 51.250, p = 0.000), this result affirms that agricultural production is a dominant occupation in the study area.

Agriculture be of the major occupation of the respondents, is a likelihood that they might have knowledge about forest resources and better utilisation of forest resources for health purpose, this finding corroborates Adebayo and Adewumi, (2024) which opined that majority of the rural populace engages in farming activities as their major source of livelihood, Secondary Occupation (x = 83.625, p = 0.000), this result affirms that agricultural production is a dominant occupation in the study area, this result also corroborates the findings of Ajani, (2013) who reported that people living in rural area diversify their sources of income in other to empower themselves economically to meet the family responsibilities, Members of Social Organization (x = 101.450, p = 0.000), the finding indicates that majority of the respondents are members of social organization, this results conforms with that of Akintonde *et al*. (2021) whose study find out that majority of the respondents belong to social organization and Usage of Herb to treat yourself (x = 285.162, p = 0.000), the finding indicates that majority of the respondents are using herb for health treatment, based on the responses obtained from the respondents, this work affirms the assertion of Akunyili (2003), cited in Mbani, (2015) that there has been a noticeable shift from orthodox 'western' medicine to greater use of traditional (herbal) medicines in many countries and indeed worldwide, had a negative but significant relationship to the level of herbs utilisation for health treatment. This implies that rural dwellers use herbs for treatment because they have access to herbal materials which gives them many advantages

of using herbs for health treatment in the study area. This explains why the WHO, (2007) stated that most people living in Africa use herbal medicines for the management or prevention of diseases.

Since the relationship is significant, null hypothesis is rejected while the alternative hypothesis is accepted as there is significant relationship between selected socio-economic characteristics and level of herbs utilisation in the study areas.

Table 7: Summary of chi-square analysis showing the relationship between some selected socio-economic characteristics and usage level

Socioeconomic characteristics variables	Chi-Square Value (χ)	df	p-value	Remark
Religion	47.262	2	0.000	Significant
Marital Status	292.625	4	0.000	Significant
Primary Occupation	51.250	4	0.000	Significant
Secondary Occupation	83.625	4	0.000	Significant
Members of Social Organization	101.450	2	0.000	Significant
Usage of Herb to treat yourself	285.162	2	0.000	Significant

Source: Computed Data, 2024

**Correlation is significant at the 0.01 level

CONCLUSION AND RECOMMENDATION

The result of this study revealed the constraints encountered by the respondents on the use of herbal medicine were Irregular dosage and measurement, increased rate of unqualified/uncertified practitioners (by no specific prescription measurement), poor hygiene during preparation, not officially approved by government for health treatment. Therefore, everybody must have the knowledge on how to process herbs for ailments treatment, there must be a policy regulating the dosage of herbs to be used for each ailment and age grade of patient, herb producers should endeavor to process herbs in an attractive environment and acceptable form for the end users. It is highly imperative for government to issue licenses to herbal medicine producers which must be renewed periodically for authenticity's sake.

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