

## PERCEPTION AND BENEFITS OF HERBAL MEDICINE AMONG ADULTS RESIDENTS IN IBADAN METROPOLIS, OYO STATE NIGERIA

**\*TUNDE-FRANCIS, A.A.,<sup>1</sup> UGEGE, B.H.,<sup>1</sup> ODEYALE, O.C.,<sup>1</sup> MUSA, F.B.<sup>1</sup> AND  
OJEDOKUN, C.A.<sup>2</sup>**

<sup>1</sup>Federal College of Forestry, Jericho Ibadan

<sup>2</sup>Forestry Research Institute of Nigeria, P.M.B 5040, Jericho hills, Ibadan, Nigeria.

Corresponding author: [aailleme@yahoo.com](mailto:aailleme@yahoo.com)

---

### Abstract

*This study examines the perception and benefits of herbal medicine among adults in Ibadan Metropolis, Oyo State. Random sampling technique was used to select 200 respondents from five urban Local Governments areas out of the eleven Local Government areas in the study area. Data were collected through the administration of structured questionnaires. Both descriptive and inferential statistic were used for the analysis of the data. The result shows that 94% of the respondents have an understanding of herbal medicine as medicine made from plant. Majority (85%) of the respondents agreed that herbal medicines builds up the body's own defenses and promotes self-healing. The study also revealed that respondents use herbal medical therapies because they feel it is cheaper, less expensive and at the same time effective when compared to conventional treatment. Also 51.5% of the respondents got to know of the herbal medicine through family members. Findings also showed that 92% of respondents believe that herbal pharmacists should be able to counsel patients on herbal medicine use. The study further revealed that there is a significant relationship between perception and benefits of herbal medicine among residents in Ibadan metropolis and that lack of scientific evidence are the major challenges facing herbal medicine as an alternative health care therapy. There is therefore need for Healthcare providers to be conversant with the commonly used herbs for the treatment of illnesses, so as to equip them to counsel their patients appropriately for best care and safety.*

**Key Words:** Perception, Benefit, Herbal Medicine, Adult, Resident

---

### Introduction

The way a man accepts an idea is based on his perception, that is, the process of assessing information in one's surrounding and this can be affected by different factors, this includes, physiology, past experiences, culture and present feelings etc. Cross-cultural research showed that perception of good

and bad health, along with health threats and problems are culturally contrived. Different ethnic groups and cultures recognize different illnesses, symptoms and causes and have developed different health-care systems and treatment strategies. Herbal medical therapies are built on the philosophical orientation of holism and the recognition that optimum

interaction between the mind and spirit establishes harmony.

In the early traditional African society, the only available form of treatment of illnesses is what is now referred to as alternative medicine (traditional or herbal medicine) where our fore-fathers go into the forest or bushes around them to cut herbs to heal/cure various illnesses. Herbal medicines are plant based medicines made from different plant parts, examples; roots, leaves, flower or the whole plant. Each part can have different medicinal use and the many types of chemical constituents require different extraction method (National Institute of Medical Herbalists). Herbal medicine has become a growing area of health care therapy in both developed and developing countries. It is defined as any practice that is put forward as having the healing effects of medicine, but it is not founded on evidence gathered using the scientific method (Disabled world, 2015). It is estimated that 80% of the world's population representing four billion people living in the developing world rely on herbal medicinal products as a primary source of healthcare and traditional medical practice which involves the use of herbs as an integral part of the culture in those communities (Mukherjee, 2002; Bodeker *et al.*, 2005; Bandaranayake, 2006). The increasing widespread use of herbal medicine has prompted the WHO to promote the integration of its use into the national health care systems of some countries. The goal of care extends beyond curing an illness to healing the client's psyche, spirit, body and even community (Davidson *et al.*, 2008). It also recognizes the body's natural healing ability and acknowledges the role of life style choices and personal responsibility for wellbeing (Braun and Cohen, 2007).

Also herbal therapies may be less expensive and more readily available to the communities that use them. For example, herbal mixtures and herbal teas are usually prepared from locally sourced and available plant roots, barks and leaves by practitioners who are indigenes of these communities, thus, most herbal remedies may be obtained at little or no cost to the consumer and it is hawked all over cities by the brewers. Davidson *et al.* (2008) stated that flower essences, essential oils, herbs and dietary supplements tends to be far less expensive than most conventional pharmaceuticals. Some are even free, such as dietary and lifestyle modification and behavioral taboos. Also visits to practitioners are usually less expensive (Davidson *et al.*, 2008), appointment is not difficult with them and there is no consultation fee charged.

Herbal medicine has its roots in every culture around the world, from the Greeks, to the Celts, the Romans to the Arabs, and the Chinese and even to the Indians. Western herbalism dates back to ancient Egypt, where records of garlic and juniper used for medicinal purposes were found from as early as 1700 B.C. By 100 B.C., the Greeks also developed a comprehensive philosophy of herbal medicine that relate different herbs to different temperaments, seasons and elements such as earth, air, fire and water. The Romans took the Greek theories of medicine and added to them, creating a wealth of medical practices, some of which are still used today (Health and Wellness, 2017).

The African continent is said to have a long history with the use of plants for medicinal purposes. And over 5,000 different species are known to occur in the forest regions alone, most of these have been used for several centuries in traditional medicine for the prevention

and treatment of diseases, this is because traditional medicine is often part of the culture of the people that use it, and as a result it is closely linked to their beliefs (Lawal *et al.*, 2009). It has also been reported that in Africa, traditional medicine is used for 80% treatment of health issues in place of primary healthcare, and in developing nations as a whole over one third of the population lack access to essential medicine (Kasilo *et al.*, 2010).

Nigeria is a developing country with poor standard of living, poor health facilities, inadequate trained and qualified personnel and a high rate of poverty which has led to poor nutrition that has resulted to several diseases and loss of lives; people cannot easily access basic healthcare facilities, therefore many resort to the use of herbal medicines, since it is readily accessible and easily affordable (Abdulraheem *et al.*, 2012). The most commonly used herbal medicines are concoctions known as 'agbo' among the people of the southwest geo-political zone, which Ibadan Oyo state falls into. Other perceived benefits of herbal medicines, includes reduced risk of side effects, that is, it may be safer to use overtime; it is also effective with chronic conditions; lower cost and widespread availability. Herbs are also available without a prescription- even some are home-grown like mint leaves, basil and aloe Vera. Therefore, this study aimed to assess the perceived benefits of herbal medicine among adults in Ibadan metropolis.

## **Materials and Methods**

### ***Study Area***

The study was carried out in Ibadan metropolis, the capital of Oyo state in

Southwest Nigeria, located on seven hills (average elevated 700 feet (200 meters) 100 miles (160 km) from the Atlantic coast. The 2006 National Population Census estimated the metropolis to be inhabited by 1.34 million people while the total population of Greater Ibadan was 2.55 million. Ibadan metropolis is made up of eleven local governments consisting of five urban areas and six semi-urban. For the purpose of this study the urban area is considered and they are Ibadan North, Ibadan Southeast, Southwest, Northeast and Northwest. The economic activities of Ibadan residents include agriculture, commerce, handcrafts, manufacturing and service industries. Ibadan has a tropical wet and dry climate with a lengthy wet season and relatively constant temperature throughout the course of the year. Ibadan is a forest site containing several ranges of hills, varying in elevation covered by the rain forest; the composition is basically the large tall crowned trees mixed with thick undergrowth. A greater percentage is grass and woodland soils, covered by loamy soils these also makes it easy for herbal medicine to thrive.

### ***Method of Data Collection***

The target population for the study were adult between the ages of 20 years and above of both gender residents in Ibadan metropolis. A well-structured questionnaire was administered to elicit information from the respondents. Sampling technique was used for the study. At the first stage, five (5) Local Government areas (urban local government area was purposively selected from the eleven (11) Local Government areas that make up the metropolis). A total of 200 questionnaires were administered to the respondents.

**Result and Discussion**

**Demographic Characteristics of the Respondents**

The table below shows that majority of the respondents 111(55.5%) were females, this revealed that females make use of herbal medicine in treating their ailment, this is in agreement with the findings of (Aagaard *et al.*, 2017) that the use of herbs for health issues is very common among women and despite the vast numbers of evidence-based modern medicine, it is still preferred. Also in related studies in Nigeria, Fakeye *et al.* (2009) and Tamuno

*et al.* (2011) reported a high rate in the use of herbal medicine among pregnant women. This also corroborates with a Canadian interview (Westfall, 2003), which also found that women consider herbs to be safer because they are “milder”, more “natural”, “simpler”, more “familiar” and caused fewer side effects. The results also show that most of the respondents 158(78.5%) had tertiary education this is an indication that a lot of elites now patronize herbal medical practitioners.

Table 1: Demographic characteristics of the respondents

Variables	Number	Percentage (%)	
Age	20-30 years	76	38
	31-40 years	56	28
	41-50 years	36	18
	51-60 years	15	7.5
	61-70 years	9	4.5
	71 years and above	8	4
	Total	200	100
Gender	Male	89	44.5
	Female	111	55.5
	Total	200	100
Marital Status	Married	103	51.5
	Single	86	43
	Widow/Widower	6	3
	Divorce/Separated	5	2.5
	Total	200	100
Educational Status	Primary school certificate	21	10.5
	SSCE/WASCE	22	11
	OND	37	18.5
	HND/BS.c	72	36
	Masters	48	24
	Total	200	100
Religion	Christianity	152	76
	Islam	48	24
	Total	200	100
Occupation	Students	64	32
	Civil servant	85	42.5
	Trader/Self-employed	41	20.5
	Unemployed	10	5
	Total	200	100

### **Perception of Herbal Medicine**

Table 2 revealed that majority 188(94%) of the respondents understood that herbal medicine is made from plant, while just (12.6%) say it is concoction from herbalist. This finding corroborates the definition provided by National Institute of herbal medicine, 2009 that herbal medicines are plant based medicine made from different plants parts. It also

corroborates Adesina (2014) findings, that herbal medicine which is an aspect of alternative medicine is a cultural gem of various communities around the world and encompasses all kinds of folk medicine, unconventional medicine and indeed any therapeutic method that had been handed down by a traditional, community or ethnic group.

Table 2: Perception of Herbal medicine

Understanding of herbal medicine	Frequency	Percentage (%)
Medicine made from Plant	188	94
Concoction from a herbalist	12	6
Total	200	100

### **Some commonly used herbs in the study area**

Herbs	uses
Lemon grass	malaria
Mango leaf	malaria
Neem leaf	malaria
Ginger	Reduce symptom of colds and chills
Cashew bark	cough
Cloves (kanafuru)	toothache and mouth infection
Alligator pepper	diabetes
Moringa leaf	diabetes
<i>Allium sativum</i> (garlic bulb)	asthma
Basil (scent leaf)	Stomach pain and dysentery
Bitter leaf	Lower sugar content and for pile

### **Choice of Herbal Medicine over Conventional Medicine**

Table 3 shows the respondents various reasons for the choice of herbal medicines over conventional medicine. 81.5% of respondents were disappointed that conventional treatment is not working, a total of 154 (77%) think herbal medicine is more in keeping with one's belief and inner self, 75.5% believe that conventional treatment is too toxic, while 71.5% are just trying anything that can help. This result is in line with the findings of Adefolaju (2014), he reported that, Nigerians, have a deep belief and reliance on traditional medicine, hence about 80 per cent of the population use it almost

exclusively while about 95 per cent use it concurrently with western medicine, because to the Nigerian, traditional medicine treats the entire individual rather than one aspect of him or just his disease, this is also in agreement with the reports of World Health Organization (2005), that traditional medicine have diverse health practices, approaches, knowledge and beliefs incorporating plant, animal and/or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain well-being as well as to treat, diagnose or prevent illness.

Table 3: Choice of herbal medicine over conventional medicine

S/N	Items	YES	NO	Mean
1	You were disappointed that conventional treatment is not working	37(18.5%)	163(81.5%)	1.82
2	Conventional treatment is too toxic	49(24.5%)	151(75.5%)	1.76
3	You think herbal medicine is more in keeping with your belief and your inner self	46(23%)	154(77%)	1.77
4	You are just trying anything that can help	57(28.5%)	143(71.5%)	1.72

**Reasons for Using Herbal Therapies**

Table 4 shows other reasons for deciding to use herbal therapies. It was discovered that over 5,000 different species of plants are known to occur in the forest regions alone, most of these have been used several centuries for the prevention and treatment of diseases, this is because traditional medicine is often

part of the culture of the people that use it, and as a result it is closely linked to their beliefs. Okeke *et al.* (2006). Also about 85% of Nigerians are known to use and consult traditional medicine practitioners for health care, social and psychological benefits, because of poverty and dissatisfaction with conventional medical care (Jaiyeoba, 2004).

Table 4: Reasons for using herbal therapies

S/N	Items	Frequency	Percentage %
1	Because it is natural compare to conventional treatment	28	14
2	Because they have more of the phytochemicals	16	8
3	Cheaper	35	17.5
4	Conventional drugs are too expensive	24	12
5	Herbal is mixed with conventional drugs*	12	6
6	Herbal medicine is less expensive and at the same time effective	32	16
7	I did not want to take drug	10	5
8	I was forced to use it	11	5.5
9	I have strong belief in natural medicine compare to chemicals	12	6
10	Recommended by older adult	9	4.5
11	To boost the immune system	11	5.5
	Total	200	100

**Perceived Health Benefit of Herbal Medicine**

Table 5 shows the perceived benefit/health of herbal medicine to users in Ibadan metropolis. Majority, 95% of the respondents agreed that it relieves symptoms they are having, 79.5% of the respondents agreed that it improves psychological/emotional wellbeing (hope, optimism).Furthermore, 78.5% of

respondents indicated that it enables them to relax , sleep and relieve the symptoms of the illness ,72% of the respondents agreed that they are taking it as a means of doing everything possible to fight the illness, 61.5% of respondents agreed that it improves physical well-being, and 56.5% of the respondents agreed that it boosts body’s ability to fight disease This findings corroborates with the studies of

Chitty (2009), Hoslt *et al.* (2009), and Fakeye *et al.* (2009) that people use herbal medicine because of the perception that, it is a safe alternative to conventional pharmaceuticals. Moreover, Darcy Cowan in Scepticon (2012) opined that people also turn to herbal medicine because they are dissatisfied with the care they received from mainstream/conventional/western medicine, especially among those with terminal disease or chronic illness. The findings also showed that majority of respondents agreed that they will use herbal medicine again for their illness or recommend it to someone with same illness. It was also discovered that residents come to know of the herbal medicine they are using/have used

through family members, friends and through advertisements in media. This is well supported by the findings of Abel and Busia (2005) in their research that, over the centuries, the indigenous people of the world have developed sophisticated social systems and traditional healers have acquired and compiled knowledge regarding the use of medicinal plants which has been disseminated from generation to generation this finding is also in line with the previous studies by Oshikoya and Senbanjo *et al.* (2008), which stated that the knowledge of traditional medicine is passed from parents to their children, spouses, relatives and friends.

Table 5: Perceived benefit/health benefit of herbal medicine

S/N	Items	YES	NO	Mean
1	it directly heals your illness	105(52.5%)	95(47.5%)	1.53
2	it boosts your body's ability to fight disease	113(56.5%)	87(43.5%)	1.57
3	it allows you to relax and sleep	157(78.5%)	43(21.5%)	1.79
4	it relieves symptoms of conventional treatment which you are receiving	190(95%)	10(5%)	1.95
5	it relieves the symptoms of the illness	157(78.5%)	43(21.5%)	1.79
6	it improves psychological/emotional wellbeing (hope, optimism)	159(79.5%)	41(20.5%)	1.80
7	to do everything possible to fight the illness*	144(72%)	56(28%)	1.72
8	it improves ones' physical well being	123(61.5%)	77(38.5%)	1.62

**Problems/challenges Confronting the Use of Herbal Medicine as an Alternative Health Care Therapy**

Table 6 shows the problems/challenges faced by herbal medicine as an alternative health care therapy, among residents in Ibadan metropolis. Majority, 92% of the respondents agreed that herbal pharmacists should be able to counsel patients on herbal medicine use, a total of 67.5% of the respondents believe that lack of scientific evidence is a barrier towards herbal medicine use while 66% of the respondents believe that it is important to

consult a healthcare provider/Professional before using herbal medicine; a good number of respondents, 54% precisely also believe that the concern of legal issues is a barrier towards herbal medicine use. Another 8.5% of the respondents believe herbal medicine is not appropriate treatment for any disease. It is important to consult a healthcare provider/professional before using herbal medicine, this agrees with the opinion of a one-time minister of health in Nigeria who said that, the inability of alternative medicine practitioners to scientifically

diagnose diseases pose a great challenge towards the acceptability of herbs for the treatment of diseases (Okakwu, Guardian Newspaper, 2014). Chen (2005), reported that a good number of herbal medicine users take it concurrently with

conventional medicine. However, some patients who use herbal products are reluctant to disclose its use to their doctors either due to criticism or because the physician failed to ask (Chang *et al.*, 2007).

Table 6: Problems/challenges confronting the use of herbal medicine as an alternative health care therapy

S/N	ITEMS	SA	A	SD	D	Mean	S.D	Ranking
1	I believe that herbal medicine has fewer side effect than Conventional medicine	43(21.5%)	114(5%)	13(6.5%)	30(15%)	2.85	.928	2 <sup>nd</sup>
2	I believe that herbal medicine is a threat to public health	15(7.5%)	35(17.5%)	62(31%)	88(44%)	1.89	.952	6 <sup>th</sup>
3	I believe that it is important to consult a healthcare provider Professional before using herbal medicine	52(26%)	80(40%)	20(10%)	48(24%)	2.68	1.106	4 <sup>th</sup>
4	I believe that lack of scientific evidence is a barrier towards herbal medicine use	48(24%)	87(43.5%)	17(8.5%)	48(24%)	2.68	1.089	3 <sup>rd</sup>
5	I believe that the concern of legal issues is a barrier towards herbal medicine use	24(12%)	84(42%)	27(13.5%)	65(32.5%)	2.34	1.058	5 <sup>th</sup>
6	I believe that herbal pharmacists should be able to counsel patients on herbal medicine use	75(37.5%)	109(54.5%)	6(3%)	10(5%)	3.25	.740	1 <sup>st</sup>
7	I believe herbal medicine is not appropriate treatment for any disease	17(8.5%)	23(11.5%)	62(31%)	98(49%)	1.80	.953	7 <sup>th</sup>

The table below shows a high perception of usage of herbal medicine among residents in Ibadan metropolis (Df = 198, N = 200, r = .593\*, P < 0.05). Based

on this there is a significant relationship between perception and use of herbal medicine among residents in Ibadan metropolis

Table 6: PPMC summary table showing the relationship between perception and usage of herbal medicine

Variables	N	Mean	Std. Dev	df	R	P
Perception of herbal medicine	200	45.6350	11.26795			
Use of herbal medicine	200	41.7250	8.88109	198	.593*	.038

**Conclusion and Recommendation**

The use of herbal medicine continues to expand rapidly across the globe with many people now resorting to the use of herbal medicine for the treatment of various health challenges. This study indicates that perception of herbal medicine is a function of the following factors; physiology, past experiences,

culture and present feelings. Most users perceived that herbs were efficacious, and in some instances, more efficacious than conventional medicines. It also revealed that most women including pregnant women make use of herbal medicine. The elites/educated also make use of herbs because they believe that herbal medicines are made from plants. Therefore, knowing

how people perceive herbal medicine, can help professional healthcare practitioners understand why people prefer to take or not to take herbal medications. Since perception may be a major contributing factor influencing the sustained and increasing popularity of herbs. There is need for relevant regulatory authorities to put in place appropriate measures for proper checks and balances for safety of usage.

### References

- Aagaard, S.K., Larsen, A., Andreasen, M.F., Uldbjerg, N. and Bor, P. (2017). Use of complementary and herbal medicine in the general population and among pregnant women. *Ugeskr Laeger*, 179(5): V0816058.
- Abel, C. and Busia, K. (2005). An exploratory ethnobotanical study of the practice of herbal medicine by the Alan people of Ghana. *Alternative Medicine Review*, 10(2): 112-122.
- Abdulraheem, I.S., Olapipo, A.R. and Amodu, M.O. (2012). "Primary health care services in Nigeria: Critical issues and strategies for enhancing the use by the rural communities", *Journal of Public Health an Epidemiology*, 4:5-13.
- Abubakar, U.S., Osodi, F.A., Aliyu, .I., Jamila, G.A., Saidu, S.R., Fatima, S.S., Sani, S.I., Ahmad, S.A. and Isoken, B.G. (2016). Thee use of traditional medicine among Bayero University community Kano. *Journal of Medicinal Plants Studies*, 4(6): 23-25.
- Adefolaju, T. (2014). Traditional and Orthodox Medical Systems in Nigeria: The Imperative of a Synthesis. *American Journal of Health Research*, 2(4): 118-124. doi: 10.11648/j.ajhr.20140204.13
- Adesina, S.K. (2013). Traditional Medical Care in Nigeria: Online Nigeria Daily News. Accessed on: 17<sup>th</sup> January, 2014 at www.onlinenigeria.com
- Adelekan, I.O. (2016). Ibadan Diagnostic Report, Working paper No. 4 Urban Ark Ibadan University
- Bandaranayake, W.M. (2006). "Quality control, screening, toxicity, and regulation of herbal drugs," in *Modern Phytomedicine. Turning Medicinal Plants into Drugs* eds Ahmad I., Aqil F., Owais M. (Weinheim: Wiley-VCH GmbH & Co. KGaA;) 25-57. 10.1002/9783527609987.ch2
- Bodeker, C., Bodeker, G., Ong, C.K., Grundy, C.K., Burford, G. and Shein, K. (2005). *WHO Global Atlas of Traditional, Complementary and Alternative Medicine*. Geneva, Switzerland: World Health Organization
- Braun, L. and Cohen, M. (2007). Herbs and natural supplements. An evidence based guide. Sidney: Elsevier.
- Chang, H.Y., Wallis, M. and Tiralongo, E. (2006). "Use of Complementary and Alternative Medicine among people living with diabetes: Literature Review". *Journal of Advanced Nursing*, 58(4): 307-319.
- Chen, H.M. (2005). "Characteristics of patients using Complementary and Alternative Medicine combined with Conventional Medicine in primary care", *Taipei City Medical Journal*, 2(3): 278-285.
- Chitty, A. (2009). Review of evidence, Complementary therapies in pregnancy. NCT New Digest, 46 (April), 20-26.
- Davidson, M.R., London, M.L. and Ladewig, P.A. (2008). Maternal newborn nursing and women's health across the life span. Upper Saddle River, New Jersey: Pearson Education Inc.

- Ewere, O.O. (2009). Herbs in Orthodox Practice: A View by Medical students. *African Journal of Traditional Complementary and Alternative Med.*, 6: 203-206.
- Fakeye, T.O., Adisa, R. and Musa, I.E. (2009). 'Attitude and Use of herbal medicine among pregnant women in Nigeria. *BMC Complementary and Alternative Medicine*, 9: p53.
- Health and Wellness, (2017) 603.862. Well (9355) 4 Pette Brook Lane, Durham, NH 03824  
[www.unh.edu/health/ohcp/herbal-medicine](http://www.unh.edu/health/ohcp/herbal-medicine)
- Holst, L., Wright, D., Haavik, S. and Nordeng, H. (2009). The use and the user of herbal remedies during pregnancy. *Journal of Alternative and Complementary Medicine*, 15(7): 787-792.
- Jaiyeoba, E.O, Falade, C.O., Fawole, O.I., Akinboye, O.O., Gbotosho, G.O., Bolaji, O.M., Ashidi, J.S., Abiodun, O.O., Osowole, O.S., Itiola, O.A., Oladipo, O., Sowunmi, A. and Oduola, A.M.J. (2004). "Efficacy of herbal remedies used by herbalist in Oyo State Nigeria for treatment of Plasmodium Falciparum infection- a Survey and observation", *African Journal of Medicine and Medical Sciences*, 33(2): 115-119.
- Kasilo, O.M.J., Trapsida, J.M., Mwikisa, C.N. and Lusamba-Dikasa, (2010). An Overview of the Traditional Medicine Situation, the African Region. *Afr. Health Monitor*, (Special issue 13).
- Lawal, I.O., Uzokwe, N.E., Ladipo, D.O., Asinwa, I.O. and Igboanugo, .A.B.I. 2009 Ethnophytotherapeutic Information for the Treatment of High Blood Pressure among the people of Ilugun, Ilugun area of Ogun state, Southwest Nigeria. *Journal of Pharmacy and Pharmacology*, 3(4): 222-226.  
<http://www.academicjournal.org/ajpp>
- Mukherjee, P.W. (2002). *Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals*. New Delhi, India: Business Horizons Publishers
- National Population Commission (NPC) (2006). Population and Housing Census of Nigeria, National Population Commission, Abuja, Nigeria.
- Okeke, T.A., Okafor, H.U. and Uzochukwu, B.S. (2006). "Traditional Healers in Nigeria: perception of cause, treatment and referral practices for severe Malaria", *Journal of Biosocial Science*, 38(4): 491-500.
- Oshikoya, K.A., Sebanjo, I.O., Njokanma, O.F. and Sopic, A. (2008). Use of Complementary and Alternative Medicine for children with chronic health conditions in Lagos, Nigeria. *BMC, Complementary and Alternative Medicine*. Retrieved May 8, 2009, from <http://www.biomedcentral.com/1472-6882/11/19>
- Tamuno, I., Omole-Ohonsi, A. and Fadare, J. (2011). Use of herbal medicine among pregnant women attending a tertiary hospital in Northern Nigeria. *The Internet Journal of Gynaecology and Obstetrics*, 15(2): ISSN: 1528-8439.
- Westfall, R.E. (2003). Herbal Healing in Pregnancy: Women's Experiences. *J. Herb Pharmacother*; 3(4):17-39.
- World health Organization (WHO), (2005). National Policy on Traditional Medicine and Regulation of Herbal Medicines – Report of a WHO Global Survey. Retrieved, March, 2nd 2013, from <http://apps.who.int/medicinedocs/pdf/s7916e/pdf>.
- World population review, 2019. Accessed on 3<sup>rd</sup> June 2019 1:40pm