

Analysis of Arable Crop Farmers' Utilization of Unorthodox and Orthodox Healthcare Services in Oyo State, Nigeria.

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Abstract

This study analysed farmers' utilization of Unorthodox and Orthodox health-care services in Oyo State, Nigeria. Primary data were collected using structured interview guide administered to 200 respondents selected using a multistage sampling technique. Data were analyzed using descriptive statistics, Pearson Product Moment Correlation (PPMC), Chi-square and t-test. Results showed that the mean age of the farmers was 52 years, majority (93.00%) were males, and 47.50% had no formal education. The average household size was 9 persons with mean income of ₦238,435.00 per annum while the mean farm size was 3.84 hectares. Almost (99.50%) all the farmers did not patronize unorthodox health care services. The farmers preferred orthodox over unorthodox health care services. Correlation analysis revealed significant relationships ($p < 0.05$) between farmers' income level ($r = 0.15$); household size ($r = 0.18$) and their utilization of orthodox health-care services. Chi-square analysis showed a significant association ($p < 0.01$) between farmers' educational level and utilization of unorthodox health-care services ($\chi^2 = 19.48$, $df = 5$). There was a significant difference ($p < 0.01$) between the patronage of orthodox and unorthodox health-care services by farming households ($t = 10.00$, $df = 398$). The study concluded that more arable crop farmers in Oyo state patronized orthodox health-care services than unorthodox health-care services. It was recommended that Government should facilitate the establishment of orthodox health-care services in the rural communities to further increase utilization of available services within the medical sphere.

Keywords: Arable crop farmers, utilization, healthcare

Introduction

World Health Organization, WHO (1948) defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". WHO (1998) realized the need of the 4th dimension of health (the spiritual health) to be considered as an important element of health. This reflected in the preamble of the WHO Constitution amended where "Health" was viewed as a dynamic state of complete physical, mental, spiritual and social well-being and not merely the absence of disease or infirmity". Health was also defined by Monique (2011) as "the ability to adapt and self manage" in the face of social, physical, and emotional challenges.

WHO (2005) opined that as a step forward to the desired goal of health for all in 2015, there is increasing interest in the development and use of products of Traditional Medicine. Africans often supplement the care they receive in clinics and hospitals with treatments from traditional healers (Fasola *et al.*, 2006; Awah, 2006).

Traditional Medicine is the sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, psychological, mental or social diseases relying exclusively on past experiences and observations handed down from generation to generation whether verbally, in writing or by other means (WHO, 2005). Awah (2006) described Traditional Medicine as practices and approaches that apply - separately or in combination - plant -, animal- and mineral -based medicines, spiritual therapies, manual techniques and exercises to diagnose, prevent and treat illnesses, or maintain or enhance well-being. For Africans, Traditional Medicine is a holistic concept which covers nature, the sociological environment whether living or dead and the metaphysical forces in the universe (Sofowora, 1993; Okunlola, 2007; Mafimisebi, and Fakoya, 2007).

Both plants and animals have been used as sources of medicine since pre-civilization period (Lev, 2003). Even in modern times, animals and plants continue to play an indispensable role in healthcare. Plant and animal parts form important ingredients in preparing medicines which can be curative, protective or preventive (Adeola, 1992).

Moreover, a considerable percentage of currently available non-synthetic and or semi-synthetic pharmaceuticals used in Orthodox Medicine comprises of drugs originating from plants, microbial, animal and mineral sources. Modern scientist medicine referred to as Orthodox medicine here is defined as a professional discipline that relies on a body of knowledge, scientific training and skills aimed at diagnosis, prevention, treatment and rehabilitation of the physically and mentally sick (Tella, 1992; Badru, 2001; Ewhrudjakpor, 2007; Okujagu,

2007). This definition encapsulates such disciplines as internal medicine, psychiatry, pediatrics, surgery, obstetrics and gynaecology, pharmacology among others.

Agrarian, rural dwellers in Nigeria produce about 95% of locally grown food commodities. The low accessibility to and affordability of Orthodox Medicine by rural dwellers and the need to keep healthy to be economically productive have led to their dependence on Traditional Medicine. The fact that Traditional Medicine practitioners' concept of disease is on a wider plane vis-à-vis Orthodox Medicine practitioners has culminated in some socio-cultural and magico-religious practices observed in preparation and use of plant medicines for farmers' health management (Mafimisebi, *et al.*, 2010).

The rural populace, which constitutes about 70% of the country's total population and provides virtually all of the nation's home-produced food, usually has little or no access to quality Orthodox Medicine. In addition, disease incidences are higher in the rural areas because of higher levels of illiteracy, poverty and ignorance (National Bureau of Statistics, 2006). According to World Bank (1993), the level of poverty has excluded a significant proportion of the population, especially in the rural locales, from accessing modern healthcare facilities even when it is available. Poor access to Orthodox Medicine is also compounded by very low public expenditure on health, amounting to about USD14.00 per person per year (source). The inadequacy of public health infrastructure is one of the major reasons for poor quality service in public health institutions. Consequently, the infant mortality in sub-Saharan Africa region is reported to be 55% higher and life expectancy about 11 years lower than the rest of the world's low income developing countries (source). Private healthcare facilities are comparatively more efficient in terms of quality of service, but service charges are far beyond the reach of an average farming household.

The most common ailment affecting farmers is malaria which has been reported as leading to drastic reduction in agricultural productivity (Ajani and Ugwu, 2008). According to WHO (1992), Malaria is now resistant to chloroquine therapy. The recommended Atesunate Combination Therapy (ACT) is hardly ever offered free in most public healthcare facilities. The average cost of malaria treatment based on ACT is estimated to be about ₦1,500 (USD 10.00) inclusive of cost of laboratory tests. This is a precise sum for the average Nigerian in the rural areas which are characterized with low household incomes. A Traditional Medicine therapy for the same ailment will cost on the average ₦200 or could even be procured for free, if the person could collect the medicinal plants and prepare the medication personally (Mafimisebi, *et al.*, 2010).

In view of this, the study was conducted to analyse farmers' utilization of Unorthodox and Orthodox health-care services in Oyo State. The specific objectives were to:

- identify the types of Unorthodox and Orthodox health-care services patronized by arable crop farmers.
- ascertain the levels of Orthodox health-care services patronized by arable crop farmers.
- Investigate arable crop farmers' preferred health-care services.
- determine the extent of utilization of Orthodox and Unorthodox health-care services by arable crop farmers.

Methodology

The study area is Oyo State in south-western part of Nigeria. It lies between latitudes 7° 10' and 9° 23' North of the Equator and longitudes 2° 25' and 4° 30' East of the Equator. Oyo State covers a total land mass of 28,454 square kilometers and bounded by Ogun State in the South and Kwara State in the North. To the west, it is bounded partly by Ogun State and partly by the Republic of Benin, while in the East it is bounded by Osun State. It is made up of 33 Local Government Areas in four Agricultural Zones, namely: Ibadan/Ibarapa, Oyo, Ogbomoso, and Saki and three Senatorial Districts namely Oyo Central, Oyo South and Oyo North. The vegetation pattern of the state is that of rain forest in the south and guinea savannah in the North. The population of Oyo State is 5,591,589 (NPC, 2006). Farming is the predominant occupation and based on the prevailing climatic and soil characteristics, three vegetation zones are identifiable in the state including the forest, savannah and the derived savannah. The forest Zone with high relative humidity favour the cultivation of tree crops such as cocoa, kola, citrus and oil palm as well as arable crops like maize, cassava, yam and rice. Areas within Ibadan Zone and up to Fiditi fall within the forest zone. The derived savannah zone has a mixture of forest and savannah vegetations, Oyo, Ogbomoso, Ilora, Fashola, Eruwa and Lanlate fall within this zone. The savannah favours mainly arable crops such as sorghum, maize, cowpea, and yam with some pockets of land which can support tree crops.

A multistage sampling technique was used to select arable crop farmers for this study. The stages include:

Stage 1: Out of the four zones of Oyo State Agricultural Development Programme (OYSADEP), fifty percent (50%) of the zones were selected using simple random sampling technique. The zones are Ibadan/Ibarapa and Oyo (Tables 1 and 2).

Stage 2: Twenty percent (20%) of Blocks in the selected zones were selected using simple random sampling technique. The blocks selected were Ido, Igboora and Otu.

Stage 3: In the third stage of selection, lists of members of the All Farmers Association of Nigeria (AFAN) in the selected blocks were used to select the respondents. As at the time of data collection, the members of AFAN in Ido, Igboora, and Otu were 974, 730 and 850 respectively. Ten percent (10%) of the members in the Association list was selected using simple random sampling technique. That is, 97 members from Ido, 73 members from Igboora and 85 members in Otu making a total of two hundred and fifty-five. Out of the 255 farmers sampled, only 200 copies of questionnaire were analyseable, representing 78.4 % response rate.

Data were collected using structured interview guide administered to 200 arable crop farmers from Ibadan/Ibarapa and Oyo zones of Oyo State Agricultural Development Programme.

Table 1: Zonal structure of OYSADEP, Oyo State

Zones	Blocks
Ibadan/Ibarapa	Ido, Moniya, Idi Ayunre, Akanran, Iyana Offa, Egbeda, Eruwa, Igboora and Ayete
Saki	Okeho, Tede, Saki, Ago Amodu, Igbeti and kisi
Oyo	Otu, Ojongbodu, Offa meta, Kosobo, Iseyin and Jobele
Ogbomosho	Kinira, Arowomole, Ajaawa, Ikoyi-ile and Iresaadu

Table 2: Sample frame

Zones	50% of zones	20% of block in each zone	No of AFAN members in the Block	10% of AFAN members selected
Ibadan/Ibarapa	Ibadan/Ibarapa	Ido	974	97
Saki		Igboora	730	73
Oyo	Oyo	Otu	850	85
Ogbomoso				
		Total		255

Note: AFAN-All Farmers' Association of Nigeria.

Results and discussion

Personal Characteristics of the Respondents

Table 3 indicates that the mean age of the arable crop farmers was 52.4 years with a majority of them falling within the range of 36-45 years. Thus, many of the farmers were agile and able bodied characterized with strength. This result supports the findings of Eze (1993) that the mean age of rural households across the various states of southeastern Nigeria was 53years. Most of the respondents (93.0%) were male implying that arable crop farming in the study area is a male dominated venture. Food and Agriculture Organization, (FAO) (2004) noted that low participation of women in arable crop production is as a result of their lack of access to credit and membership in rural organizations which has adversely affected the access of women farmers to agricultural inputs and technologies. Majority (47.5%) of the respondents had no formal education indicating that they were illiterates. Majority (75.5%) of the farmers earned ₦100,000- ₦500,000 per annum. The mean annual income was ₦238,435. This implies that most of the arable crops farmers in the study area could still be described as low income earners. This is consistent with Mafimisebi *et al.*, (2010) who reported that average household income in most of sub-Saharan African is extremely low compared to that of other developing and developed economies. The mean farm size was 4 hectares with most (63.0%) of the respondents cultivating 1-5 hectares of land. This implies that majority of the farmers owned manageable sizes of farm land. 44.5% of the respondents had a household size ranging from 5 to 8 persons with mean household size of 9 persons. This shows that farmers in the study area had a fairly large household size which could in turn serve as an insurance against sudden drop in the supply of farm labour. Sule *et al.*, (2002) reported that household size had a great role to play in family labour provision in the agricultural sector. Majority (87.0%) of the respondents had farming as the major occupation. Oluwatayo (2008) noted that farming was the major occupation of respondents in the rural areas of Nigeria.

Table 3: Personal characteristics of the respondents (n=200)

Variables	Frequency	Percentage (%)	Mean
Age (years)			
≤ 35	15	7.5	
36-45	60	30.0	52.44
46-55	49	24.5	
56-65	44	22.0	
> 65	32	16.0	
Sex			
Male	186	93.0	
Female	14	7.0	
Educational level			
No formal education	95	47.5	
Primary uncompleted	18	9.0	
Primary completed	42	21.0	
Secondary uncompleted	7	3.5	
Secondary completed	27	13.5	
Tertiary education	11	5.5	
Income level /annum (Naira)			
< 100,000	33	16.5	238,435:00
100,000-500,000	151	75.5	
>500,000	16	8.0	
Farm size (Hectares)			
< 1	32	16.0	3.84
1-5	126	63.0	
6-10	27	13.5	
>10	15	7.5	
Household size			
1-4	30	15.0	8.67
5-8	89	44.5	
9-12	49	24.5	
>12	32	16.0	
Primary occupation			
Farming	174	87.0	
Artisan	5	2.5	
Trading	13	6.5	
Civil service	8	4.0	
Secondary occupation			
Farming	24	12.0	
Artisan	35	17.5	
Trading	29	14.5	
Civil service	1	0.5	
Pensioner	2	1.0	
Politics	1	0.5	
None	108	54.0	

Source: Field Survey, 2012

Types of unorthodox health care services patronized by arable crop farmers.

As shown in Table 4, the unorthodox healthcare commonly patronized by the farmers include general traditional health services (90.5%), herbal care services (85.5%) and ear piercing (85.0%). Other healthcare services including local orthopaedic care services, mental health care services, Spiritual Healing Services and Child Welfare and Immunization were not commonly patronized by the farmers. The respondents patronized unorthodox healthcare services for ear piercing using local and experienced adult women instead of visiting nurses at the maternity centres and general hospitals.

Table 4: Types of unorthodox health care services patronized by arable crop farmers.

Unorthodox health care services	Patronized	Not patronized
Midwifery services (Traditional Birth Attendant)	11(5.5)*	189(94.5)
Local orthopedic care (Bone setters)	1 (0.5)	199(99.5)
General Traditional Health services	181 (90.5)	19(9.5)
Herbal care services	171 (85.5)	29(14.5)
Mental health care services	1(0.5)	199(99.5)
Spiritual Healing Services	2(1.0)	198(99.0)
Child welfare and immunization	17(8.5)	183(91.5)
Circumcision	18(9.0)	182(91.0)
Ear piercing	170 (85.0)	30(15.0)

Source: Field Survey, 2012

*Figures in parentheses are percentages

Types of orthodox health care services patronized by arable crop farmers.

Table 5 shows that most (93.5%) of the respondents patronized general medicine for the treatment of malaria and typhoid fever respectively. Ajani and Ashagidigbi (2008) found that among the major diseases that are common in Africa, malaria is one of the greatest threats facing development in Africa today. Also, 89.0% of the respondents patronized ante-natal care, labour and delivery services, while 91.0% and 91.5% of respondents patronized orthodox healthcare services for circumcision and Child welfare and immunization services respectively. Dental oral hygiene (1.0%), infertility management services (1.5%) and general surgery and orthopedic (9.0%) were the least patronized orthodox health care services among the farmers. It implies that some of the orthodox health care services enjoyed high patronage by the farmers. The finding supports the assertion of Fujitsu (2008) that patients today have much higher expectations of modern health care providers than they did before.

Table 5: Types of orthodox health care services patronized by arable crop farmers

Variables	Patronized	Not patronized
Child welfare and immunization services	183(91.5)*	17(8.5)
Circumcision	182(91.0)	18(9.0)
Ear piercing	30(15.0)	170(85.0)
General surgery and orthopedic	18(9.0)	182(91.0)
Dental surgery	65(32.5)	135(67.5)
Dental and oral hygiene (scaling and polishing)	2(1.0)	198(99.0)
Infertility management services	3(1.5)	197(99.0)
Family planning services	155(77.5)	45(22.5)
Ante-Natal services Labour and Delivery	178(89.0)	22(11.0)
General Medicine (For the treatment of Malaria, Typhoid fever, etc.)	187 (93.5)	13(6.5)

Source: Field Survey, 2012

*Figures in parentheses are percentages.

Levels of orthodox health care services patronized by arable crop farmers.

Table 6 reveals that 97.0% of respondents patronized primary health care, 89.5% patronized secondary health care while 6.5% patronized tertiary health care. The availability of primary health care centres in most villages could be responsible for the large number of respondents who patronized the primary health care centers. This is in contrast to findings by Oluwatayo (2008) where the majority of the households made use of herbal treatment because they lacked money to pay hospital bills, unavailability of nearby government hospitals and as such conditions got worse before getting to the hospitals.

Table 6: Levels of orthodox health care services patronized by arable crop farmers.

Variables	Patronized	Not patronized
Primary Health-Care	194(97.0)*	6 (3.0)
Secondary Health-Care	179(89.5)	21(10.5)
Tertiary Health Care	13(6.5)	187(93.5)

Source: Field Survey, 2012

*Figures in parentheses are percentages

Arable Crop Farmers' Preferred healthcare services

As shown in Table 7, majority (81.0%) of the respondents preferred modern health care services to traditional health care services while just few (29.0%) preferred traditional health care services to modern health care services. This finding supports the report of WHO, (2005) that since the introduction of modern medicine into the Western Pacific Region, traditional medicine has in most cases been rejected by mainstream health services. Respondents who preferred traditional health care services did so probably because of their affordability, accessibility, acceptability, effectiveness and availability.

Table 7: Arable Crop Farmers' preferred health care services

Variables	Preferred	Not preferred
Unorthodox health care services	58 (29.0)*	142(71.0)
Orthodox health care services	162(81.0)	38(19.0)

Source: Field Survey, 2012.

*Figures in parentheses are percentages

Frequency distribution of Arable crop farmers scores on extent of utilization of orthodox and unorthodox healthcare services with the mean score and standard deviation by categorization.

Table 8 shows that 99.0% of the respondents never utilized orthodox and unorthodox health care services for general surgery and orthopaedic/local bone setting respectively, 99.5% never utilized orthodox and unorthodox health care services for dental surgery and mental health care services respectively, while 91.5% and 91.0% of the respondents utilized orthodox health care services for child welfare and Immunization services and circumcision respectively. Nevertheless, 80.5% and 19.0% of the respondents utilized orthodox and unorthodox health care services in general medicine and general traditional health care services/herbal care cases respectively. This result means that general surgery, orthopaedic, dental and mental health care treatments are lacking in most primary health care services located in rural areas. This result is in contrast with Wales (2011) assertion that common chronic illnesses usually treated in primary health care may include, for example: hypertension, diabetes, asthma, depression and anxiety, back pain, arthritis or thyroid dysfunction. With reference to table 10a, categorization method for orthodox utilization is computed thus:

$$X \pm 1S.D, \quad \text{where, mean score (X)} = 9.4 \text{ to } 1 \text{ decimal place}$$

$$\text{Standard Deviation (S.D)} = 1.6 \text{ to } 1 \text{ decimal place}$$

$$X + 1S.D = 9.4 + 1.6 = 11.0$$

$$X - 1S.D = 9.4 - 1.6 = 7.8$$

$$X - 2 S.D = 9.4 - 2 \times 1.6 = 9.4 - 3.2 = 6.2$$

$$\text{Note: Maximum arable crop farmer's score} = 12$$

$$\text{Minimum arable crop farmer's score} = 3$$

From the above, categorization of utilization scores are derived as follows:

- Utilization Scores Less than 6.2
- Utilization scores between 6.2 to 7.7
- Utilization scores between 7.8 to 9.3
- Utilization scores between 9.4 to 10.9
- Utilization scores from 11.0 or above 11.0

Table 8a: Frequency distribution of Arable crop farmers scores on utilization with the mean score and standard deviation.

Variables	Orthodox			Unorthodox					
	Frequently	Occasionally	Never	Mean score X	S.D	Frequently	Occasionally	Never	Mean score S.D X
Child welfare and Immunization services	183(91.5)	-	17(8.5)	1.83	0.56	17(8.5)	-	183(91.5)	0.17 0.56
Circumcision	182(91.0)	-	18(9.0)	1.82	0.57	18(9.0)	-	182(91.0)	0.18 0.57
Ear piercing	30(15.0)	-	170(85.0)	0.30	0.72	170(85.0)	-	30(15.0)	1.70 0.72
General surgery and orthopedic/local bone setting	2(1.0)	-	198(99.0)	0.02	0.20	1(0.5)	1(0.5)	198(99.0)	0.02 0.17
Ante-natal care, labour and delivery services/ traditional birth attendant services	178(89.0)	-	22(11.0)	1.78	0.63	22(11.0)	-	178(89.0)	0.22 0.63
Infertility management services	-	3(1.5)	197(99.0)	0.02	0.12	-	-	200(100.0)	0.00 0.00
Family planning services	155(77.5)	-	45(22.5)	1.55	0.84	-	-	200(100.0)	0.00 0.00
General medicine /general traditional Health care services /herbal care	161(80.5)	33(16.5)	6(3.0)	1.78	0.49	38(19.0)	158(79.0)	4(2.0)	0.00 1.00
Dental surgery	-	65(32.5)	135(67.5)	0.33	0.47	-	1(0.5)	199(99.5)	0.00 0.00
Dental and oral hygiene (scaling and polishing)	-	2(1.0)	198(99.0)	0.01	0.10	-	-	200(100.0)	0.00 0.00
Mental health care services	-	-	200(100.0)	0.00	0.00	-	1(0.5)	199(99.5)	0.01 0.00
Total				9.44	1.55				2.29 1.58

Source: Field Survey, 2012

Frequency distribution and percentages scores of orthodox health care services utilization by arable crop farmers.

Table 8b shows that the frequency distribution of arable crop farmers' scores on utilization is positively skewed. This implies that more arable crop farmers (57.0 + 14.5%) fall above the mean (X) = 9.4, which means that majority (71.5%) of arable crop farmers are utilizing orthodox health care services.

Table 8b: Frequency distribution of arable crop farmers by utilization scores.

Utilization scores categories	Frequency	Percentage
Less than 6.2	15.0	7.5
6.2 to 7.7	6.0	3.0
7.8 to 9.3	36.0	18.0
9.4 to 10.9	114.0	57.0
11.0 or above 11.0	29.0	14.5
	200.0	100.0

Source: Field Survey, 2012

Relationship between personal characteristics of the arable crop farmers and their utilization of orthodox and unorthodox health-care services

Findings in Table 9 shows significant relationships between farmers' income level ($r = 0.159$, $p < 0.05$); household size ($r = 0.181$, $p < 0.05$) and their utilization of orthodox health-care services. This implies that farmers' income level and household size determine the utilization of orthodox health-care services. This means that farmers who are high income earners could have a greater patronage of orthodox health-care services. That is, utilization of orthodox health-care services depends on farmers' financial status. This is in line with Awoyemi, Obayelu and Opaluwa (2011) who reported that the utilization of modern health facilities decreases with household size.

Table 9: Relationship between personal characteristics of the arable crop farmers and their utilization of orthodox health care services.

Variables	r	p value	Decision
Age	0.023	0.749	NS
Income level	0.159	0.025*	S
Farm size	-0.059	0.411	NS
Household size	0.181	0.011*	S

Source: Field Survey, 2012

* Significant at 0.05%

Chi-square analysis results as indicated in Table 10 shows significant relationships between farmers' educational level ($\chi^2 = 10.833$, $p < 0.05$), primary occupation ($\chi^2 = 10.44$, $p < 0.05$) and their utilization of orthodox health-care services. This implies that farmers' educational level and primary occupation are related farmers' utilization of orthodox health-care services. This means that farmers with a high level of education might patronize orthodox health-care services more than non-literate farmers; likewise for primary education. This reason could be that some farmers who patronized orthodox health-care services might have been influenced by other farmers in the urban areas who have attached importance to visiting hospitals whenever the need arises. This supports Grainne (2003) assertion that educated Nigerians are likely to have abandoned most traditional beliefs with respect to religion and health and will adapt more easily to Western medical systems.

Table 10: Relationship between personal characteristics of the arable crop farmers and their utilization of orthodox health care services.

Variable	χ^2	p value	Decision
Sex	0.691	0.486	NS
Educational level	10.833	0.054*	S
Primary Occupation	10.424	0.015*	S
Secondary Occupation	8.303	0.217	NS

Source: Field Survey, 2012

* Significant at 0.05%

Table 11 shows a significant relationship between farmers' educational level ($\chi^2 = 19.488$, $p < 0.01$) and their utilization of unorthodox health-care services. This result shows that farmers' utilization of unorthodox health-care services is influenced by their level of education. For instance, aged farmers who had no formal education might claim that unorthodox health-care services have been playing a significant role in their health life. Therefore, they tend to patronize unorthodox medicine due to their low level of exposure. This study has a similar result of Grainne (2003) who discovered that most illiterate or inadequately educated Nigerians still continue to adhere strongly to their traditional beliefs.

Table 11: Relationship between personal characteristics of the arable crop farmers and their utilization of unorthodox health care services.

Variable	χ^2	P value	Decision
Gender	0.690	0.421	NS
Educational level	19.488	0.002**	S
Primary Occupation	10.424	0.067	NS
Secondary Occupation	7.922	0.244	NS

Source: Field Survey, 2012

** Significant at 0.01%

Test of Difference between patronage of Orthodox and Unorthodox Health-care services by arable crop farmers

Table 12 reveals that there is a significant difference between patronage of orthodox and unorthodox Health-care services by arable crop farmers ($t = -10.003$, $p < 0.01$). This implies that farmers' patronage of orthodox and unorthodox health care services are different from each other. This is traceable to the fact that farmers' choice of the health-care services is determined by variable such as income, educational level, household size, etc. Hence decisions to use a particular service depend on the value attached to it by the arable crop farmers. This supports Oluwatayo (2008) who reported that the majority of the household make use of herbal treatment because of lack of money to pay hospital bills, government hospitals which are not close to their residence and as such conditions might have been worsened before getting to the hospital.

Table 12: Significant difference between the patronage of Orthodox and Unorthodox Health-care services by arable crop farmers

Variable	N	Mean	Standard deviation	Standard error mean	t	df	P value	Decision
Patronage of Unorthodox Health care	200	8.45	4.322	0.306	-10.003	398	0.0001**	S
Patronage of Orthodox Health care	200	12.72	4.215	0.298				

Source: Field survey, 2012

** Significant at 0.01%

Conclusion and Recommendations

Some personal characteristics (income, educational level) established a significant relationship with arable crop farmers' utilization of orthodox healthcare services while educational level influenced the patronage of unorthodox healthcare services by arable crop farmers. Also arable crop farmers' patronage of unorthodox healthcare services has not been totally eradicated, some are still using experienced mother in carrying out ear piercing of their children instead of patronizing nurses in the hospitals. However, a large number of arable crop farmers preferred orthodox healthcare services to unorthodox healthcare services in the treatment of Malaria, typhoid fever etc. Primary healthcare level is well patronized by arable crop farmers followed by secondary and tertiary healthcare levels. Most of the arable crop farmers frequently utilized orthodox healthcare services for child welfare and Immunization and circumcision services while some respondents occasionally utilized unorthodox healthcare services for herbal care services, etc.

The following recommendations are made from the study. Since farmers income affect their utilization of health-care services, arable crop farmers should focus more on the income generating activities which could boost their income so that their financial stability can enhance their choice of health-care services. Government should facilitate the establishment of orthodox health-care services in the rural communities to further increase utilization of available services within medical sphere. Also, since few arable crop farmers are still patronizing unorthodox health-care services, there is need for orthodox health-care practitioners to collaborate with unorthodox health-care practitioners by organizing trainings in order to better the services of unorthodox health-care practitioners to the community.

RECOMMENDATIONS

The following recommendations are proffered from the study:

- Since farmers income affect their utilization of health-care services, arable crop farmers should focus more on income generating activities which could boost their income so that their financial stability can enhance their choice of health-care services.

- Government should facilitate the establishment of orthodox health-care services in the rural communities to further increase utilization of available services within the medical sphere.
- Also, since few arable crop farmers are still patronizing unorthodox health-care services, there is need for orthodox health-care practitioners to collaborate with unorthodox health-care practitioners by organizing trainings in order to better the services of unorthodox health-care practitioners to the community.

REFERENCES

- Adeola, M.O. (1992). Importance of wild animals and their parts in the culture, religious festival and traditional medicine of Nigeria. Cambridge, University Press.
- Ajani, O.Y., and Ugwu, P.C. (2008). Impact of adverse health on agricultural productivity of farmers in Kainji Basin, North Central Nigeria using a stochastic production frontier approach trends in *Agric. Econ.*, 1 (1): 1-7
- Awah, P. (2006). Diabetes and traditional medicine in Africa. *Diabetes voice*, 51 (3)
- Awoyemi, T.T. Obayelu, O.A and Opaluwa, H.I. (2011). Effect of Distance on utilization of Health Care Services in rural Kogi state. *Journal of human Ecology*, 35(1): 1-9 Kamla-Raj.
- Badru, F.I. (2001). Sociology of Health and Illness Relations. In Oluode, L. and Soyombo, O. eds.; *Sociology of Health and illness Relations*. Ikeja: John West Publications, 326 – 355.
- Buor, D. (2008). Analyzing the Socio-spatial Inequalities in the access of health services in sub-Saharan Africa: interrogating geographical in balances in the uptake of health care. Professional inaugural lecture, Kwame Nkurumah University of Science and Technology, Kumasi.
- Ewhrudjakpor, C. (2007). Conceptualizing Africans perception of Disease as District from Euro-America practice. *Journal of Social and Policy Issues*, 4(3): 8 -11.
- Eze, N.O.A. (1993). Labour use and Productivity in Yam Based household Farms of South-Eastern Nigeria. University of Portharcourt. Nigeria.
- Fasola, R.R., Akintola, F., Ivbijaro, M.F.A., and Okechukwu, R.U. (2006). The impact of traditional medicine on the people and environment of Nigeria. *Sustainable Environmental Management in Nigeria*. 251-267.
- Food and Agriculture Organization (2004). Improving the Relevance and Effectiveness of Agricultural Extension activities. Natural resources Management and Environment Department.
- Fujitsu (2008). Enabling modern health care: The role of I.T in raising productivity, improving outcomes and supporting patient-centric services. White paper Global health care. Fujits
- Grainne, O.D. (2003). The Mosney women: an actor oriented approach to the social and political factors affecting ‘Nigerian’ women’s experience of child birth in Ireland. M.A Thesis, Trinity College: Dublin.
- Lev., E. (2003). Traditional healing with animals (zootherapy): medieval to present day Levantine practice. *Journal of Ethnopharmacol*, 86:107-118.
- Mafimisebi, T.E., Adegboyega, E. and Oguntade, A.E. (2010). Preparation and use of plant medicine for farmers health in South-Western Nigeria. *Journal of Ethnobiology and ethnomedicine*. <http://www.ethnobiomed.com/content/6/1/1/>
- Mafimisebi T.E., and Fakoya O.E. (2007). Awareness and uptake of traditional livestock health management practices based on medicines derived from medicinal plants among farmers in Southwest, Nigeria. Medicinal Plants in Agriculture: The Nigerian Experience. Proceedings of the Akure-Humboldt Kellog/3rd SAAT Annual Conference Onibi G.E, Agele S.O, Adekunle V.A.J, Olufayo M.O, 204 – 213.
- Monique, J. G. (2011). Accessibility and Affordability needed to define Health and Healthcare BMJ4 www.bmj.com/./buyd4817
- National Bureau of Statistics (2006). Nigerian Core Welfare Indicators.
- Okujagu, T.I. (2007). Researching into the Untapped Goldmine of Herbal Medicine. *The Herbal Doctor: A Journal of African Medicine*, 1(2):13 -18.
- Okunlola, J.O. (2007). The Sociology of the use of Medicinal Plants. Medicinal Plants in Agriculture: The Nigerian Experience. Proceedings of the Akure-Humboldt Kellog-3rd SAAT Annual Conference Onibi G.E, Agele S.O, Adekunle V.A.J, Olufayo, M.O., XLIV-LII.
- Oluwatayo, I.B. (2008). Explaining Inequality and Welfare status of Households in Rural Nigeria. Evidence from Ekiti state. *Humanity and social sciences Journal* 3(1):70-80 on June 1, 2010).
- Sofowora, A. (1993). Medicinal Plants and Traditional Medicine in Africa spectrum Books Limited. Ibadan 289.
- Sule, A.M; Ogunwale, S.A. and Atala, T.K. (2002). Factors affecting adoption of fishing innovation among fishing entrepreneurs in Jebba lake community. In: T.A. Olowu (ed.), *Journal of Agricultural Extension*. Vol. 6: 48-60.
- Tella, A. (1992). Orthodox Medicine / Traditional Medicine in Quest of Health for All by the Year 2000 A.D. Maiduguri: University of Maiduguri Press.

- Wales, J. (2011). Health care Wikipedia article-free encyclopedia.
- World Bank (1993). Strategy to Develop Agriculture and a focus for the World Bank. World Bank Technical Paper Number 203, Africa Technical Department Series, 1 – 10.
- World Health Organization (1948). Definition of Terms. Accessed 24 June 2011.
- World Health Organisation (1992). Review of Traditional Medicine Programme (TRM) No AFR/RC.42/19, Brazzaville.
- World Health Organization (1998). Closing the gap in a generation: Health equity through action on the social determinants of health. (Available from: http://en.wikipedia.org/wiki/social_determinants_of_health).
- World Health Organization (2005). Use of traditional medicine in Western Pacific Region. Traditional medicine in the treatment of cancers and inflammations

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