

EXTENT OF USE OF ORTHODOX AND TRADITIONAL TREATMENTS AND PREVENTIVE MEASURES AGAINST MALARIA AMONG RURAL DWELLERS IN ABIA STATE

OBINNA LEO. O. AND UMEH O IFEANYI

Michael Okpara University of Agriculture, Umudike

Corresponding author's Email: obinna.leo@mouau.edu.ng; obinna.leo2@gmail.com, donchris204@yahoo.com, Phone : 08035454465

ABSTRACT

The study assessed the extent of use of the orthodox and traditional treatment preventive measures against malaria among rural dwellers in Abia State. Primary data were collected using structured questionnaire from 180 respondents via multi- stage procedure. Data were subjected to descriptive statistics analysis. About 78% and 95.6% of the respondents were married and literates respectively. A mean age of 46 years, a mean monthly income of about ₦24,227.78 and a mean household size of about 5 persons respectively were recorded by the respondents. The result further revealed that the respondents employed different types of malaria treatment practices (100% of the respondents employed orthodox practices and 11.78% employed traditional practices). The extent of adoption of malaria preventive measures was low (X= 2.2) and only about 45.4% of the respondents had a good knowledge level in the use of orthodox malaria treatment practices . The result equally revealed low (X= 1.78) attitudinal level by the respondents towards the use of orthodox malaria treatment practices. It equally, revealed a low (X= 1.98) practice level and gave the Relative Credibility Index (RCI) of the respondents over the use of traditional methods of controlling malaria as (RCI = 2.9). The study concludes that the respondents in the study area had a low Knowledge, Attitude and Practice (KAP) level over the use of orthodox malaria treatment practices. Therefore, the study recommends more awareness campaign by the health workers mostly in the rural areas in order to increase the KAP level of the rural dwellers in the use of orthodox malaria treatment practices as this will enormously reduce the devastating effects of malaria sickness in Nigeria and mostly in the study area,

Key words: Malaria Treatments, Orthodox, Traditional and Abia State.

INTRODUCTION

Healthcare can be broadly divided into modern medicine (Orthodox) and traditional medicine (Ladele and Bisi-Amosun, 2014). Nwakwasi (2013) defined Orthodox medicine as a system in which medical doctors and other healthcare professionals (such as nurses, pharmacists and therapists) treat symptoms and diseases using drugs, radiation or surgery. On the other hand, traditional medicine is the sum total of all knowledge and practices, whether explicable or not, used in diagnosing, preventing and eliminating physical, mental or societal imbalance, relying exclusively on practical experience and observations handed down from generation to generation, whether verbally or written (World Health Organization (WHO), 2002).

Malaria is a debilitating infectious disease characterized by chills, shaking and periodic bouts of intense fever (Adams, 2007). It is a life threatening disease caused by protozoan parasite of *genus plasmodium* that are transmitted from person to person by the bite of infected female anopheles mosquito (WHO 2010). Malaria parasites have the widest distribution, extending

through the tropics, sub-tropics, temperate zones, Central and West Africa and some Pacific Islands depending on the species (Ochei and Kalhatkar, 2000). It is acknowledged that climatic variability, especially temperature and rainfall patterns, are the main factors that determine the prevalence of malaria in any geographical area (Muller, Traore, Kouyate, Ye, Frey, Coulibaly, and Becher, 2006). Some researchers have also argued that socio-economic factors and local environmental conditions that operate at smaller spatial scales are more critical in explaining the incidence of malaria rather than climatic factors (Brooker, Clarke, Njagi, Polack, Mugo, Estambale, Muchiri, Magnussen, and Cox, 2004; Githerko, Ajisi, Odada, Atieli, Ndenga, and Githure, 2006; Cohen, Ernest, Lindblade, Vulule, John, and Wilson, 2008). Similarly, Gamage, Carter, Mendis, de Zoysa, Herash, and Mendis (1991) revealed that there is a relationship between type of house and incidence of malaria. These researchers demonstrated that people living in impoverished houses especially those that had brick or plastered walls are less likely to be affected by malaria than those living in very poor houses. In Nigeria, malaria is endemic and occurs throughout the year with seasonal variations (Federal Ministry Of Health (FMOH), 2008). It kills nearly one million people every year and causes millions of Nigerians to be sick. FMOH (1990) equally, noted that malaria accounts for about 60% of out-patients visits and 30% of hospitalizations, 25% of death in children under one year old, and 11% of maternal deaths in Nigeria. Nwakwasi (2013) similarly, reported that malaria is directly responsible for one in five childhood deaths and indirectly contributes to a sizeable proportion of childhood morbidity and mortality resulting from additional illnesses such as respiratory infections, diarrhea diseases, iron deficiency (anemia) and malnutrition.

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity; anything that disrupts the physical, mental and social well-being of a person can cause ill-health in him/her (WHO, 2009). The importance of health as a form of human capital cannot be over emphasized. Good health and productive agriculture are important in the economy of any nation, especially in the fight against poverty (Nwakwasi, 2013). Health enhances work effectiveness and the productivity of an individual, through increase in physical and mental capacities (Asiamah, Dzadze and Gyasi, 2014). Asiamah, Dzadze and Gyasi (2014) noted that there was a positive relationship between health and productivity of skilled and unskilled labour. Good health relates to labour output or better production organization (since people of good health generally have better intellectual capacities that can enhance farmers/households income and economic growth). Health affects agricultural systems by affecting the health of the producers. Poor health results in loss of work-days or decrease workers' capacity, decrease innovation ability and ability to explore diverse farming practices. Adefolaju (2014) equally, opined that health capital is affected by a number of preventable diseases; malaria, muscular disorders, HIV/AIDS, farm-injuries, yellow fever, among others.

The impact of malaria on human health, productivity and human development in developing countries such as Nigeria is well profound (Moyi, Bunza and Tukur, 2017). This poses serious challenge to the survival of several vulnerable poor whose livelihood depends solely on the productivity of arable crops. Oluwatayo (2014) asserted that malaria and agriculture are intimately related and tends to have causal relationship. Since agricultural environments provide suitable conditions for breeding of disease vectors, which causes malaria in human beings. To that effect, Asenso-Okyere, Asante, Tarekegn and Andom (2009) observed that risk of malaria transmission in malaria endemic areas increased with increasing levels in irrigation water for agricultural activities through dams, reservoirs, bore holes, amongst others. These create favourable environments for mosquito activity all year long. Utzinger, Tanner, Kammen,

Killeen, and Singer (2002), reported that the WHO'S proposed strategy for controlling malaria included: the Integrated Malaria Management (IMM) which comprises; the simultaneous application of measures to enhance environmental quality, control the vector and the malaria parasite, Indoor Residual Spraying (IRS) and the use of Insecticide Treated Nets (ITNs) among others. On the other, Tarimo, Lwihula, Minijas and Bygbjerg (2000) equally, noted that many malaria cases in Nigeria and elsewhere in the developing world are not reported at the hospital. Since, they observed that the prevalence of malaria was still high in Nigeria. Therefore, the high incidence of clinical malaria cases means that malaria control strategies are not achieving very good results. They further noted that cases reported by hospitals may only represent cases reported by children and pregnant women who are said to have lower immunities. It was on that note that Deresa, Ali, and Enqueslassie (2003) stated that mere knowledge of malaria control measures does not always translate into utilization. They therefore, revealed that, utilization of strategies is shaped by several socio-political factors including income levels and cultural beliefs. It was on that note that Adefolaju (2014) reported that about 80% of Nigerian population uses traditional medicine exclusively while about 95% uses it concurrently with western medicine. He further argued that this was because to some Nigerians, traditional medicine treats the entire individual rather than one aspect of him or just his disease. This is in confirmation with the report of the 1st International conference of the Malaria Foundation International (1999) which noted that utilization of traditional medicine was widespread in non- industrialized countries. That the efficacy of many traditional treatments has been well documented, including in the area of skin disorder and allied fields, malaria and other parasitic disorders. It equally noted that modern pharmaceuticals were not available in constant supply mostly in Sub- Saharan Africa, South and South- East Asia where malaria parasites were endemic. The report further noted that due to resistance of malaria to major drugs used in treating bacterial and parasitic diseases the treatment options of treating malaria significantly reduced. Also, that the cost of drugs, if available and effective was so high that institutions and patients were unable to afford them. The report concluded that the poorer members of the society used traditional medicine treating malaria for economic reasons. Therefore, it was in line with the above that the study aimed at investigating the extent of use of the orthodox and traditional treatment practices and preventive measures adopted in controlling malaria illness among the rural households in Abia State: The following specific objectives guided the investigation, they included to:

- (i) examine the socio- economic characteristics of the respondents in the study area;
- (ii) identify the extent of use of different malarial treatment practices among the respondents;
- (iii) identify the extent of use of malaria preventive measures adopted by the respondents;
- (iv) describe the respondents' knowledge, attitude and practice (KAP) in the use of orthodox treatment practices of malaria in the study area; and
- (v) determine the relative credibility index of using the traditional methods in controlling malaria illness among the respondents.

METHODOLOGY

The study was conducted in Abia State, Nigeria. The population of the study comprised all the rural dwellers in the State. Abia State is situated in the South- Eastern part of Nigeria is predominantly populated by Igbo race (Obinna, and Nzeako 2015). The state is located on latitude $40^{\circ} - 70^{\circ}$ N and $7^{\circ} - 8^{\circ}$ E of the Equator and Greenwich Meridian respectively (Abia – ADP, 2006). The State has a total land mass of about 5833.77 Km^2 , with a total population of

2,833,999.00 and a population density of 486 persons / Km² (NPC, 2007). The State is also situated in the rainforest belt of Nigeria with a temperature range of 20 – 30⁰ Celsius with two earmarked season (dry and rainy seasons) The dry season starts from November and ends in March, while the rainy season starts from April and ends in October (Abia – ADP, 2006). About 70 % of Abians are involved in agricultural production which contributes about 27% of the State GDP (Abia State Ministry of Health (ASMH), 2010). Major agricultural activities include: crops production, poultry, animal production, fisheries, snailery, apiculture among others (Abia- ADP, 2006).

Sampling Size and Sampling procedures

Abia State is divided into 17 local Government Areas (LGAs) and three Senatorial Zones namely: Abia North comprising of 5 LGAs, Abia Central 6 LGAs and Abia South 6 LGAs respectively. A multi – stage sampling technique was adopted in selecting a sample size of 180 respondents. Firstly: A simple randomized method was used to select Ununneochi, Bende and Arochukwu LGAs from Abia North Senatorial Zone, Umuahia North, Ikwuano and Isiala- Ngwa North LGAs from Abia Central and Ukwu East, Aba South and Ugwuagbo LGAs from Abia South Senatorial Zone. Secondly: 2 Electoral Wards (EW) were randomly selected from each of the 9 LGAs to give 18 EWs. Thirdly: 10 respondents were randomly selected from each of the EWs to give a total of 180 respondents that were used for the study. Primary data were generated via structured questionnaire and analyzed using descriptive statistics such as frequency count, percentage, mean, pooled mean, and ranks. The analysis of objectives (i),& (ii) involved the use of simple percentages and mean. Objective (iii) involved the use of a four- point- type- likert scale of Very Often (4pts), Often (3pts), Not Very Often, (2pts.) and Never, (1pt.) respectively. A decision rule was made as follows: Any mean ≥ 2.5 points was adjudged often while any mean < 2.5 points was adjudged not often. For the determination of extent of use: means between 0 and 2.49 points were regarded as low Extent of use while means between 2.5 and 4.0 points were regarded as high Extent of use. Objective (iv) was analyzed using the Knowledge, Attitude and Practice (KAP) model in line with Obinna and Nzeakor (2015) and objective (v) was analyzed using the Relative Credibility Index (RCI) model which is expressed as follows: $RCI = X/Y \times 100/N \dots (1)$

Where X = Number of respondents who perceived traditional methods of controlling malaria was the most credible.

Y = Number of the respondents who perceived traditional methods of controlling malaria was the least credible.

N= Total number of the respondents and RCI = Relative Credibility Index of using traditional methods in controlling malaria in the study area.

RESULTS AND DISCUSSION

Distribution of the Respondents According to Socio- Economic Characteristics

Table 1 shows the mean age of the respondents to be about 46 years of whom 55.6% were males and 44.4% were females respectively. The Table equally shows about 16.7% of the respondents were single, 75% currently married and 8.3% previously married respectively. Table 1 further shows that about 95.6% of the respondents were literates and about 30.6% traders, 36.1% farmers, 16.7% artisans, 11.1% civil servants and 5.6% unemployed respectively.

The Table equally, shows the mean household size as about 5 persons with a mean monthly income of about ₦24,277.78 respectively. The implications of the results are that the respondents

were still young (46 yrs.), energetic, mature and responsible and earned a moderate monthly income of (₦24,277.78 per month). The findings equally imply that the respondents were literate enough to know what their needs are and how to take the best decisions for themselves if encouraged. This corroborates Obinna and Nzeakor (2015) who stated that rural people are intelligent enough to know their needs but that they lacked the capacity to do so unless assisted.

Table 1: Distribution of the Respondents According to Socio- Economic Characteristics

S/No	Variables	Frequency	Percentage (%)
01	Age (years)		
	25 – 35	50	27.78
	36 – 46	45	25.00
	47 – 57	40	22.22
	58 – 68	30	16.67
	69 & above	15	8.33
	Mean		46 years
02	Sex		
	Males	100	55.56
	Females	80	44.44
03	Marital Status		
	Single	30	16.67
	Currently Married	135	75.00
	Previously Married	15	8.33
04	Level of Education		
	No education	8	4.44
	Primary	52	28.89
	Secondary	90	50.00
	Tertiary	20	11.11
	Vocational	10	5.56
05	Primary Occupation		
	Traders	55	30.56
	Farmers	65	36.11
	Artisans	30	16.67
	Civil Servants	20	11.11
	Unemployed	10	5.56
06	Household Size (No of Persons)		
	≤ 2	30	16.67
	3 - 5	60	33.33
	6 - 8	70	38.89
	9 & above	20	11.11
	Mean	5 persons	
07	Monthly Income in (₦)		
	≤ 18,000.00	50	27.78
	19,000.00 – 29,000.00	60	33.33
	30,000.00 – 40,000.00	40	22.22
	41,000.00 – 51,000.00	20	11.11
	52,000.00 & Above	10	5.56
	Mean	₦24,277.78	

Determination of Extent of Use of Treatment Practices Against Malaria Illness

Table 2 shows that all (100%) of the respondents used orthodox anti – malarial drugs and injections against malaria illness in the study area. It equally, shows that about 38.9 % of the respondents used traditional herbal medicinal preparations in treating malaria illness. Table 2 further shows that 22.2% of the respondents visited the traditional native healing houses for the treatment of malaria. Also, about 5.6% of the respondents visited prayer healing houses for malarial treatment while 2.8% consulted their oracle for treatment of malaria and 1.7% avoided eating of sweet and oily food as treatment against malaria respectively. From the findings one may conclude that malaria illness was treated by different treatment practices, 100% of the respondents made use of orthodox methods while about 11.87 of the respondents used traditional methods. Therefore, the treatment method adopted depended on what the respondents suspected to be the cause of the illness. This corroborates Moyi, Bunza and Tukur (2017) who observed that people’s beliefs on the causes of malaria illness dictated the type and choice of treatment practices applied. They further noted that poverty and ignorance of the people played vital role in the choice and type of treatment practices against malaria.

Table 2: Distribution of the Respondents According to Their Extent of Use of Different Treatment Practices Against Malaria Illness

S/No	Treatment practices	Type of medicine	Responses Ratings		Percentage (%)	Ranks
			Yes	No		
1	Anti – malarial drugs and injection treatment	Orthodox	180	Nil	100	1 st
2	Herbal Medicinal preparation treatment	Traditional	70	110	38.9	2 nd
3	Going to Native healing houses for treatment	Traditional	40	140	22.2	3 rd
4	Going to prayer houses for treatment	Traditional	10	170	5.6	4 th
5	Consultation of Oracle for healing	Traditional	5	175	2.8	5 th
6	Avoidance of eating sweet and oily things as curative measure	Traditional	3	177	1.7	6 th

Identification of Orthodox and Traditional Malarial Preventive Measures Adopted by the Respondents

Table 3 shows that the regular use of anti – malarial preventive drugs which is aimed at destroying the plasmodium parasite scored a mean of 2.39 and was adjudged often and at high extent, while the use of insecticides and mosquito coils which aims at preventing contacts between man and the vector scored a mean of (X= 2.28) and was significant and high extent. The use of treated mosquito bet-nets and placement of nets on the doors and windows aimed at preventing contact between man and the vector scored (X= 1.9) was not often and scored a low extent. Environmental sanitation, hygiene, desilting of gutters and clearing of bushes which aimed at the destruction/ reduction of the vectors scored a mean of (X= 2.8) was often and high extent. The use of fans both local and electricity propelled fans which aimed at preventing

contact between man and vectors scored (X= 2.9) and was often and high extent. Table 3 further shows that burning of scent leaves as mosquitoes repellents which aimed at preventing contact between man and vectors scored (X= 2.2) and was not often and low extent. Wearing of long cloths / booths had a mean of (X= 2.1) and was not often and low extent while avoiding standing in the sun for long time which aimed at destroying the plasmodium parasite had a mean of (X= 1.7) and was not often and low extent and avoidance of eating oily and sweet things aimed at destroying plasmodium parasite scored a mean of (X= 1.1) was not often and low extent. The pooled mean for the extent of use of malaria preventive measures in the study area was (X= 2.2) which implied low extent. The implications of the findings in Table 3 generally shows that the extent of use of malaria preventive measures was low (X= 2.2) and that the respondents in the study area made use of regular anti – malarial preventive drugs, used of insecticides/ mosquito coils, environmental sanitation, desilting of gutters and clearing of bushes and used fans as preventive measures against malaria illness. The findings corroborate Asiamah, Dzadze and Gyasi (2014) who observed that strategies used by farmers in Ashanti Region of Ghana in the prevention of malaria included visiting the hospitals regularly, keeping clean surroundings, using insecticide treated bed nets and clearing of gutters. The finding is also in line with the observation of WHO (2002) which stated the three main component strategies in many countries in controlling malaria include: control of vector; prevention of the contact between man; and vector and measures aimed at controlling the parasite.

Table 3: Distribution of the Respondents According to Preventive Measures against Malarial Illness

S/N	Malarial Preventive Measures	Aims of Measures	V/O	N/V/O	N	MEA N	REMARKS	
01	Regular use of anti-malarial drugs	Destruction of plasmodium parasite	20	50	70	60	2.39	High Extent
02	Use of treated mosquito –bed nets & Nets on doors & windows	Prevention of contacts between man & vectors	30	30	80	40	2.28	Low Extent
03	Environmental Sanitation, desilting of gutters, & clearing of bushes	Destruction/ Reduction of Vectors	50	60	60	10	2.8	High Extent
04	Use of fans to drive away mosquitoes	Prevention of contact between man and vectors	60	40	80	-	2.9	High Extent
05	Burning of scent leaves as mosquito repellents	Prevention of contact between man & vector	20	30	90	40	2.2	Low Extent
06	Wearing of long	Prevention of	30	30	40	90	2.1	Low Extent

	cloths/ booths	contact between man & vector						
07	Avoiding standing in the sun for a long time	Destruction of plasmodium parasite	10	10	70	90	1.7	Low Extent
08	Avoid eating oily & sweet things	Destruction of plasmodium	-		30	140	1.28	Low Extent
09	Pooled Mean				10	=	2.21	Low Extent

V/O = Very Often, weighted and scored 4pts, O = Often, weighted and scored 3pts, N/V/O = Not Very Often, weighted and scored 2pts, N = Never, weighted and scored 1 pt. Decision rule: Any mean ≥ 2.5 was adjudged often, while any mean < 2.5 was adjudged not often.

Description of the Knowledge, Attitude and Practice (KAP) level of the Respondents in the Use of Orthodox Malaria Treatment Practices

Table 4a shows that the treatment practices of malaria by the respondents through visits to hospitals / healthcare clinics scored high (55.56 %) knowledge level. Also, running test before treatment of malaria by the respondents scored a low (16.7 %) knowledge level and the respondents equally, indicated that the different types and dosages of malaria drugs for adults and children scored high (50 %) knowledge level. The knowledge level of the respondents over pregnant women not taking certain malaria drugs also scored high (61.1 %). The Table equally, shows that the knowledge level of the respondents over self- medication was low (33.3%), while the knowledge level of the respondents over the danger of untreated malaria sickness was high (55.6 %). The pooled mean of the knowledge level of the respondents in the use of orthodox malaria treatment practices was low (45.4%). This implies that the respondents’ knowledge level on the use of the orthodox malaria treatment practices in the study area was generally low. This corroborates Duru, Diwe, Uwakwe, Duru, Merenu, Iwu, Oluoha, and Ohanle (2016) who reported high prevalence of traditional medicine use in the treatment of malaria in Nigeria.

Table 4 a: Distribution of the Respondents According to Knowledge Level in the Use of Orthodox Malaria Treatment Practices.

S/No	Orthodox Treatment Practices	Ratings		Remarks
		Yes	No	
01	Do you know that you have to always visit the hospital/ health clinic for malaria treatment?	100	80	High Knowledge
02	Do you know you have to always run a test before malaria treatment?	30	150	Low Knowledge
03	Do you know there are different malaria drugs and dosages for adults and children?	90	90	50.0% High Knowledge
04	Do you know that pregnant women are not advised to take certain malaria drugs?	110	70	61.1% High Knowledge
05	Do you know that self- medication for malaria treatment is dangerous?	60	120	33.3% Low Knowledge
06	Do you know that untreated malaria sickness kills or causes other complications?	100	80	55.6 % High Knowledge

Decision rule: Any percentage mean (%) ≥ 50% was adjudged High Knowledge level while any % mean < 50% was adjudged Low Knowledge level.

The Attitudinal level of the Respondents in the use of orthodox malaria treatment practices

The Attitudinal level of the Respondents in the Use of Orthodox Malaria Treatment Practices is as presented in Table 4b. Table 4b shows low (1.3) attitudinal level of the respondents over treatment of malaria sickness through visits to hospital / health care centres. It equally, shows low (1.28) attitudinal level in running test before treating malaria sickness. Table 4b further shows high (2.0) attitudinal level in giving different types of malaria drugs to different types of patient depending on the patient. The respondents equally, indicated high (2.00) attitudinal level towards patronizing unqualified healthcare personnel for the treatment of malaria sickness. Table 4 b also shows a pooled mean ($X= 1.73$) which implied a low level of attitude of the respondents towards the use of orthodox malaria treatment practices in the study area. The implication of the finding is that majority (80%) of the people in the study area still very much rely on the use of traditional treatment practices against malaria illness in the study area. This corroborates Adefolaju (2014) who stated that about 80% of Nigerians uses traditional medicine exclusively in the treatment of malaria illness.

Table 4b: Distribution of the Respondents According to Attitudinal level in the use of orthodox malaria treatment practices.

S/No	Orthodox Treatment Practices	Attitudinal Ratings			Mean	Remarks	
		S/A	A	D/A			
01	Treatment of malaria illness outside hospitals/ health clinic is not advised	15	30	135	1.33	Low level	Attitudinal
02	Treatment of malaria sickness always requires running a test before treatment	10	30	140	1.28	Low level	Attitudinal
03	Types of malaria treatment given to patient differs according patient	60	60	60	2.00	High level	Attitudinal
04	Pregnant women should not take certain malaria drugs	70	50	60	2.33	High level	Attitudinal
05	Patronizing unqualified healthcare personnel for treatment of malaria is not advised	60	60	60	2.00	High level	Attitudinal
Pooled Mean				=	1.73	Low level	Attitudinal

N/B = S/A = Strongly Agreed, weighted and scored 3 points, A = Agreed weighted and scored 2 points and D/A = Disagreed, weighted and scored 1 point

Decision Rule: Any mean < 1.9 was adjudged low attitudinal level, while any mean ≥ 2.0 was adjudged high attitudinal level.

The practice level of the respondents in the use of orthodox malaria treatment practices

Table 4c shows that the respondents indicated low (1.8) practice level in visiting hospitals/ health clinic in the treatment of malaria sickness. It equally, shows low (1.7) practice level in running test before treating malaria illness. Table 4c further shows that the respondents indicated high (2.7) practice level in treating malaria sickness without consulting a doctor. Pregnant women not taking any type of malaria drugs scored low (1.6) practice level, while purchase of malarial drugs from chemist shops and road side drug vendors scored high (2.78) practice level and treatment of malaria sickness concurrently using both orthodox and traditional treatment practices scored high (2.56) practice level. This corroborates the finding of Adefolaju (2014) which observed that about 95% of Nigerians concurrently used traditional medicine with orthodox medicine. The findings in Tables 4a, b and c tend to suggest that the KAP level of the respondents over the use of orthodox malaria treatment practices in the study area is low. This corroborates Azabre, Teye and Yaro (2013) who observed that the ineffectiveness of Insecticide Treated Nets (ITNs) which is one of the major orthodox preventive measures against malaria sickness is the fact that the strategy is not appropriately used by many people due to lack of KAP on the use of orthodox malaria treatment practices.

Table 4c: Distribution of the Respondents According to Practice Level in the use of orthodox malaria treatment practices

S/No	Orthodox Treatment Practices	Practice Ratings				Mean	Remarks
		V/O	O	N/V/O	N		
01	Do you go to hospitals/ health clinic for malaria treatment?	10	80	60	80	1.83	Low Practice Level
02	Do you always run a test before treating malaria?	5	20	70	85	1.69	Low Practice level
03	Do you always treat malaria with any kind of drugs not prescribed by a physician?	50	60	30	40	2.67	High Practice level
04	Do pregnant women take any kind of malaria treatment/	-	20	60	100	1.56	Low Practice level
05	Do you always treat malaria at chemist shops / roadside drug vendors?	60	40	60	20	2.78	High Practice level
06	Do you always treat malaria concurrently with orthodox and traditional treatment practices?	50	50	30	50	2.56	High Practice level
	Pooled Mean			=		1.98	Low Practice level

N/B V/O = Very Often, weighted and scored 4 points, O = Often, weighted and scored 3 points, N/V/O = Not Very Often, weighted and scored 2 points, N = Never, weighted and scored 1 point respectively. Decision Rule: Any mean ≥ 2.5 was adjudged high practice level, while any mean < 2.5 was adjudged low practice level.

Determination of the Relative Credibility Index of Using the Traditional Methods in the Control of Malaria Illness

Table 5 shows that the treatment of malaria through traditional methods were handed down to the respondents by their forefathers ranked 1st (RCI=9.44). In the 2nd position (RCI = 4.44) was the affordability of the traditional methods. In the 3rd position (RCI = 2.78) was the accessibility of the traditional methods. Table 5 further shows in the 4th position (RCI= 1.44) was the availability of the traditional methods and in the 5th (RCI = 1.11), 6th (RCI = 0.87) and 7th (RCI

=0.69) respectively were the natural content of the traditional medicine, no- side effect nature of the traditional medicine and simplicity of use of traditional medicine respectively. The implication of the findings tend to draw the conclusion that the traditional methods of treating malaria illness in the study area are very popular, common and very familiar to the respondents. This corroborates Duru et al, (2016) who stated that the use of traditional medicine among Nigerians has been on the upward trend, which varies depending on several other factors such as socio- demographic, economic to pattern, duration and severity of the sickness.

Table 5: The Relative Credibility Index of Using Traditional Methods in Controlling Malaria Illness.

S/No	Traditional Methods of Controlling Malaria	Most Credible	Least Credible	RCI
01	Traditional methods are very familiar/ common from generation to generation	170	10	9.44
02	Traditional methods are affordable	160	20	4.44
03	Traditional methods are very accessible	150	30	2.78
04	Traditional methods are very much available	130	50	1.44
05	Traditional methods are very natural	120	60	1.11
06	Traditional methods have no side effects	110	70	0.87
07	Traditional methods are very simple to use	100	80	0.69

CONCLUSION AND RECOMMENDATIONS

The study revealed that the low (45.4%) proportion of the respondents had good knowledge level in the use of orthodox malaria treatment practices, low ($X=1.73$) attitudinal level in the use of orthodox malaria treatment practices and low ($X=1.98$) practice level in the use of orthodox malaria treatment practices. The study therefore concludes that the respondents in the study area had low ($X=1.85$) Knowledge, Attitude and Practice (KAP) level in the use of orthodox malaria treatment practices.

The study therefore recommends the following:

1. That more awareness campaign by health workers be mounted, mostly in the study area;
2. that governments and other stakeholders in the health sector of the nation should gear efforts together as to ensure that orthodox malaria treatment practices are made available to the rural people, mostly in the study area.

This will increase the KAP level of the rural dwellers in the use of orthodox malaria treatment practices.

REFERENCES

- Abia – ADP (200). Root and Tuber Expansion Programme (RTEP), Annual Report 2001 – 2006 pp1 – 52
- Abia – State Strategic Health Development Plan (2010 – 2015), Report Abia State Ministry of Health, pp1 -18.
- Adams, J. H (2007): Malaria Microsoft- Student 2008. Redmond, W. A Microsoft Corporation, 2007.

Journal of Agriculture and Social Research (JASR) Vol. 16, No. 2, 2016

- Adefolaju, T. (2014). Traditional and Orthodox Medicine System in Nigeria: The Imperative of a Synthesis. *American Journal of Health Research* 2 (4): 118 – 124
- Asenso-Okyere, K., Asante, F. A, Tarekegn, J and Andam, S. K. (2009): Linkages between malaria and agriculture: Issues for policy research and capacity strengthening, HPRI discussion, P. 00861.
- Asiamah, M. T., Dzadze, P. and Gyasi, B (2014). The effect of malaria on staple food crop production in Ejisu- Juaben Municipality of the Ashanti Region of Ghana. *Journal of Agricultural Extension and Rural Development* 6(3): 87-93
- Azabre, B. A, Teye, J. K. and Yaro, J. A. (2013): Malaria control strategies in the Kassena-Nankana East and West Districts of Ghana. *Journal of Geography Vol. 5* 2013.
- Brooker, S., Clarke, S., Njagi, J. K., Polack, S., Mugo, B., Estambale, B., Muchiri, E., Magnussen, P., and Cox, J (2004): Spatial Clustering of malaria and associated risk factors during an epidemic in a highland area of Western Kenya. *Tropical Medicine and International Health* 9(7): 757- 766.
- Cohen, J. M., Ernest, K. C., Lindblade, K. A., Vulule, J. M., John, C. C, and Wilson, M. L (2008): Topography- derived wetness indices are associated with household- level malaria risk in two communities in the Western Kenyan highlands. *Malaria Journal*, 2008, 7- 40.
- Deressa, W., Ali, A., and Enqusellassie, F. (2003). Self- treatment of malaria in rural communities, Butajira, Southern Ethiopia. *Bulletin of the World Health Organization* 81, 261-268.
- Duru, C. B., Diwe, K. C., Uwakwe, K. A., Duru, C. A., Merenu, I. A., Iwu, A. C., Oluoha, U. R., and Ohanle, I. (2016): Combined Orthodox and Traditional Medicine use among Households in Orlu, Imo State, Nigeria: Prevalence and Determinants. *World Journal of prevalence Medicine* 4(1), 2016.
- Federal Ministry Of Health (FMOH) (1990) Guidelines for malaria control for physicians in Nigeria. Federal Ministry of Health Federal Republic of Nigeria, May, 1990.
- FMOH (2008). The Nigeria Health Financing policy, Federal Ministry of Health, Abuja, Nigeria.
- Gamage, M. A. C., Carter, R., Mendis, C., de Zoysa, A. P. K., Herash, P. R. J. and Mendis, K. N. (1991) Clustering of malaria infectious within an endemic population: risk of malaria associated with the type of housing construction: *American Journal of Tropical Medicine and Hygiene* 45: 77 – 85
- Githerko, A. K., Ajisi, J. M., Odada, P. K., Atieli, F. I., Ndenga, B. A., and Githure, J. I. (2006). Topography and malaria transmission heterogeneity in Western Kenya highlands: Prospects for focal vector control. *Malaria Journal November* 10; 5: 107
- Ladele, A. A. and Bisi - Amosun, O.O. (2014) Level of utilization of traditional and orthodox medicines by Rural Dwellers in Ile- Ogbo Community of Osun State, Nigeria. *Journal of Agricultural Extension*, 2014; 18(1): 155- 168
- Moyi, S. I., Bunza, M. D. A. and Tukur, K (2017) Treatment practices and preventive measures adopted against malaria in selected LGAs of Zamfara State, Nigeria. *Journal of Biological Science Vol. 6(1), pp6 – 10 April 2017.*
- Muller, O., Traore, C., Kouyate, B., Ye, Y, Frey, C., Coulibaly, B and Becher, H. (2006): Effects of insecticide- treated bed net protection during early infancy in an African area of intense malaria transmission; randomized controlled trail. *Bulletin of the World Health Organization* 84: 120 - 126
- National Population Commission (NPC) (2007). A Blue of 2006 National Census Abuja, Nigeria.

Journal of Agriculture and Social Research (JASR) Vol. 16, No. 2, 2016

- Nwakwasi, R. N. (2013). Evaluation of traditional and orthodox methods of malaria control for enhanced agricultural Production for food security in South East, Nigeria. A Ph.D Dissertation presented to the Department of Rural Sociology and Extension Michael Okpara University of Agriculture, Umudike.
- Obinna, L. O. and Nzeakor, F. C. (2015). GAP Bee- Keeping Survey in Umuahia Agricultural Zone of Abia State, Nigeria: A Case Study of Farmers' Knowledge, Attitude, and Practices. *Int. Journal of Applied Research and Technology* 4(9): 10 – 16.
- Tarimo, D. S., Lwihula, G. K., Minijas, J. N. and Bygbjerg, I. C. (2000) Mothers' perception and knowledge on childhood malaria in the Wolo endemic Kibaha district, Tanzania: Implication for malaria control and the IMCI Strategy. *Tropical Medicine and International Health* 5 179 – 184
- Utzinger, J., Tanner, M., Kammen, D. M., Killeen., G. F., and Singer, B. H. (2002). Integrated Programme is key to Malaria Control, *Nature* 419:431
- WHO (2009). WHO Definition of health. WHO Geneva (RAYLOOK for 2009 in real text later)
- World Health Organization (WHO) (2002) Traditional Medicine Strategy 2001 – 2005. WHO Geneva 2002; 3 – 4
- World Health Organization (WHO) (2010). Malaria Fact Sheet No. 94