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Local Aetiology and Pathways to Care in Malaria among the Ibibio of South-coastal Nigeria

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Abstract
There is a parallel between local and bio-medical perceptions of malaria among the Ibibio people of South-coastal Nigeria, as in many other societies of sub-Saharan Africa where malaria is endemic. Despite the fact that this accounts for resilience of the disease, earlier studies on malaria in Africa focused on causes, prevalence and socio-environmental factors. Local meanings of malaria and their influence on therapeutic choices have been largely ignored. This study examines local perceptions of malaria among the Ibibio and explains how attitudes are generated from indigenous meanings. It also examines how such attitudes inform a local aetiology of malaria. Similarly, our study examines how local meanings of, and attitudes towards malaria, set the pathway of care in malaria management among the Ibibio. Through qualitative and descriptive ethnography, Key Informant Interview (KII), Focus Group Discussion (FGD) and the textual analysis of documents, our study seeks to establish that malaria is caused by parasites–protozoa. 83% of the respondents held that malaria is due to witchcraft, exposure to sunlight and eating of yellowish food items such as yellow maize, paw-paw, orange and red oil. These local perceptions are drawn from local conceptions which in turn encourage malaria patients to seek assistance outside modern health care facilities. This also discourages local communities from attending health education workshops that link malaria with germ theory and care. Treatment of malaria is thus mostly home-based where a wide variety of traditional remedies is practiced. Our study concludes that the lack of convergence between local knowledge-contents and bio-medical explanations account for a high prevalence rate and the lack of effective management. For proper management of malaria, there is a need to understand local knowledge and indigenous concepts in order to establish a convergence between bio-medical explanations and indigenous perceptions. Only then can a community acceptable means of changing bio-medical perceptions of the disease be facilitated.

Keywords: *Malaria; Local Aetiology; Nigeria*

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1. Introduction

Our study seeks to adequately engender local understandings and perceptions of malaria in such a way that community knowledge may be considered in malaria control mechanisms among the Ibibio and by extension in sub-Saharan Africa.

The Ibibio's beliefs in the aetiology and etymology of malaria run contrary to the western bio-medical paradigm: a parallel assumption and perception exists that continues to deter the optimum effects of malaria intervention and disease control among the people. This in effect partly explains as to why malaria remains a major health problem for the Ibibio people, as is the case in many other sub-Sahara African societies. Despite the national and international interventions engineered against malaria over the years, due to the lack of convergence between local and bio-medical perceptions, the disease remains the cause of high morbidity and mortality rates in many sub-Sahara African societies (Sumba, Lindsay, et al, 2008). The bio-medical optic, perceives the disease as a parasitic infection that is responsible for the deaths of thousands of people in sub-Saharan Africa, including Nigerians. Attempts and official intervention strategies are thus generated to tackle the inception, growth and spread of the bacteria. Local perceptions signalling the cultural specifics of malaria and its management in sub Saharan Africa are mostly ignored. The consequence of this approach is that malaria still remains an intractable disease that continues to affect several thousands of sub-Saharan Africans over the years (Ojewale, 2005).

Malaria accounted for the death of 8% of the mortality rate in Ghana in 1997 (Ahorlu, et al, 1997). In 2007, malaria was still the commonest cause of death of Ethiopian children under the age of 5, also accounting as the commonest cause of loss of healthy days among the Ethiopian labour force (Deressa and Ali, 2008). Indeed, according to Deressa and Ali (2008), malaria remains leading cause of morbidity and mortality among Ethiopian children (as of 2007). Malaria also caused an estimated 1.2 million deaths in the Cote D' Iviore, among which 40% died while in hospital out-patient care, whilst 20% of the victims were reportedly in-patients. Beiersmann, et al (2007) likewise reported that in Burkina Faso, several deaths occur annually as a result of malaria attacks. In Nigeria, between 2000 and 2005, the cumulative prevalence rate for malaria infection in most parts of the country stood at 100% (Oregba et al, 2005). Within this period, available data on malaria incidence in Nigeria further revealed that 10% of all child deaths were directly due to malaria and 25% indirectly attributed to the disease. Malaria is therefore the main cause of morbidity and mortality in Nigeria (Akogun and John, 2004; Oregba, et al 2005).

A further fact almost difficult to fathom, is that every hour one million people are attacked by malaria in Nigeria (Osobu, 2009), who are consequently incapacitated or killed by malaria fever (WHO, 2009 FMH, 2007). Up until 2008, between 20 and 25 % of all Nigerian hospital admissions were due to malaria (WHO, 2009). In 2009, Malaria accounted for 10% of Nigerian disease burden (FMH, 2010), and in 2011, 90% of mortality rates in Nigeria

were due to malaria. This pegged Nigeria as foremost ranking in malaria incidences for sub-Saharan Africa (WHO, 2012). Much attention has been given to fight malaria globally both at national and international, governmental and non-governmental levels including several interventionist programmes. From the discovery of *Quinny* in Nigeria in the early 19th century (Schram, 1974) to the uncountable number of bio-medical drugs that were subsequently produced against malaria, the ailment seems to be an intractable disease in Nigeria. Since 2002, the roll back malaria programme was unveiled yet it failed to rescue Nigerians from the scourge of the disease. Cumulatively a lot of human, capital and time resources have been plunged into the fight against malaria, which remains a dominant killer of both young and old in many parts of Nigeria (WHO, 2009).

While previous studies focused on economic, ecological and political aspects of malaria management, little or no attention has been drawn to how the "local" concept of malaria informs specific knowledge creation and how such a disease is interpreted to influence the utilization of bio-medical based malaria interventions. The existing knowledge of malaria lacks the "local" factors influencing malaria resistance in Nigeria, a situation common to most sub Sahara African countries, consequently resulting in a dissymmetry between culture factors and bio-medical strategy. This situation (where the "global" eclipses the "local") partly explains the poor results of malaria intervention in sub-Saharan Africa. More specifically, the significance of local perception (which entails belief systems) matters in understanding a disease, and especially how such local understandings can come to bear influence upon the choice of therapy sought.

As culture is an indispensable microscope for examining attitudes towards disease (Ajala and Adejumo, 2007), the cultural template of a particular morbid entity and its nosography can shed more light on therapeutic choices and the knowledge frameworks within which these choices are articulated and translated. Such specifics include local terms for disease; attitudes and responses emanating from such terms; how those attitudes construct responsibility to manage the disease and the cumulative effects such constructions on community health, arising from local understandings of the disease. Specifically, as culture contributes to differences in medical care, it also gives meanings to diseases. Culture spells out what constitutes a disease and the choice of health care system (Scaefar; 2008). The socio-cultural dynamics of disease also suggest that responses to diseases in terms of their management remarkably differ across human societies, simply due to cultural differences (Owumi, 1994). Thus there is the need to understand the cultural context of disease in any community so that a concerted response can be adequately crafted.

II. Methodology and Research

Malaria in Ibibio is a telling, important example, where the resilience of malaria in Ibibio can be scrutinized in terms of the lacking reconciliation between the bio-medical and local perceptions of the disease. Certain research questions drive the present enquiry: In what ways has the local term(s) for malaria influenced the local perception of malaria? How is the bio-medical perception of malaria related with the Ibibio local perception of the disease? In what ways does the local perception of malaria determine the choice of therapy in malaria management among the people? Is there any relationship between the local perception of malaria and the level of prevalence of the disease among the Ibibio? What is the pattern of utilization of medical facilities in malaria management among the Ibibio?

Specifically, our study focuses on local cultural specifics such as the perception of disease arising from local terminologies, beliefs and attitudes and how such cultural contents knowledge-creation influence malaria management among the Ibibio of Akwa Ibom state, Nigeria. In this study, the local knowledge of and attitudes towards malaria were investigated alongside the beliefs that define, enforce and enhance such local perceptions. Through descriptive ethnography, the western ideas of malaria to solving the disease were equally investigated.

Within this baseline, local ideas were critically analysed to see if there a point of reconciliation between the two existed.

Further, to explain how such worldview impacts on aetiology and management of malaria, our research engaged in multi-lateral, comprehensive and descriptive ethnography. Drawing largely from the *emic* approach (how people think), albeit with some sense of *etic* perception (what is ethnographically important) of Ibibio in the world of malaria, our study is data driven and community centred. Our investigation is also case specific as no two cultures are almost the same especially in the construction of cultural ideas through symbolic representation.

Our study was designed as a descriptive ethnography, relying exclusively on qualitative methodology where both the individual and the community served as the basis of data interpretation. The need for this arose from the desire to capture a multi-lateral perception of local culture surrounding the aetiology and management of malaria in the Ibibio region. In addition an inter-subjective non-systematic selection of the respondents was employed, since malaria infection is non-spatial in restriction. It is also highly unlikely that an Ibibio resident has not experienced malaria infection. Hence, to grasp as many local perceptions as possible, an extensive ethnographic study of the Ibibio people and its responses to malaria as a disease was carried out in a culturally sensitive context. The local language, Ibibio, was used in the field with research being conducted using both emic/etic frameworks. Local knowledge and beliefs associated with malaria were interrogated using folk or local terminologies based on the cultural context of the disease.

The Ibibio people presently occupy 14 out of the thirty one (31) local government areas of Akwa Ibom State. They therefore form the majority ethnic group. Akwa Ibom state lies between latitudes $4^0$25" and $5^0$30" North and longitude $7^0$30" and $8^0$30" East. The state is bounded in the North by cross River state and by the Bight of Bonny in the South. In the West, it shares a common boundary with Abia state. Ibibio land lies within the vegetation belt of the tropical rain forest. This vegetation belt is known to be a conducive breeding ground for mosquitoes due to the high degree of humidity throughout the year. Malaria is endemic to the area.

Traditionally, medical practice among the Ibibio was carried out in the context of the traditional / indigenous religion. This involved the use of both natural and supernatural means to maintain good health prevention and cure diseases (Ekong 2007). Medicine and magic were practiced hand in hand, commonly so, by traditional healers in the quest for health sustainability among the people. Plants and other natural substances were heavily relied upon for the prevention of physical ailments while magico-religious rituals were used for those suspected to have supernatural undertones (Esema 2002, Ekong 2001). Even today, the Ibibio people are known for their belief in the efficacy of herbal remedies and ritual practices in the prevention and cure of certain diseases. The notion of germ theory in the aetiology of disease is completely alien to Ibibio culture.

It is believed by the Ibibio that diseases are caused by a person's lifestyle/habits of consumption and supernatural factors. In Ibibio cosmology, animals, insects and other natural elements do not cause or transmit diseases except when they are used by the gods as a punishment against a person, or group.[1] Our study population involved three sets of residents:

(i) Adults aged 18 years above;

(ii) Health and Medical practitioners both traditional and modern; and

[1] The choice of the above population was to ensure a wider coverage of respondents across all ages with a view to establishing a holistic view of local knowledge-creation

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(iii) Children aged between 10 and 17 years who are able to narrate previous experiences of malaria.

The study relied on non-systematic sampling. Hence a sizeable number of respondents was selected to achieve objective and generalized data from the field. Specifically, each of the non-systematically selected respondents was engaged in deep and intensive interview. The sampling produced the selection of:

(i) 8 research communities both rural and urban on equal divides from 4 local government areas;

(ii) 21 respondents for the Key Informants Interview;

(iii) 56 discussants in 7 sessions of Focus Group Discussions

(iv) 43 episodes of malaria caring through observations.

Secondary data were sourced from textbooks; academic journals; magazines and government / organizational publications. Primary data were collected from the field relying on the triangulation of key informant interviews, Focus Group discussion (FGD) and Non-participatory Observation.

A total of 21 key informants were used across the 8 study locations: and an average of 2 key informants was used in each research location. Some of the informants were identified during the pre-field visit and others during the FGD sessions were singled out for further interview. These respondents provided testimony on traditional treatment regimes and processes involved in the preparation and administration of traditional remedies in malaria management. Traditional and modern healers, caregivers, as well as malaria patients were selected and interviewed on a one -on -one basis. The instrument used for the key informant interview consisted of 12 open-ended question guides that allowed the respondents to freely express opinion on the respective issues under investigation.

Eight sessions of Focus Group Discussion (FGD) were held in all field locations, which served as avenues for self expression. Information so gathered was used to complement the data obtained through other methods. Each session was limited to seven discussants and lasted one hour. This was to ensure sufficient time for each participant to air his/her views. Interview sessions were interactive in order to elicit comments and responses that clearly brought out local terminologies associated with malaria and the cultural significance of the disease.[2]

43 sessions of malaria care were observed mainly through non-participatory observations. Included in the observations were the traditional and modern healers, caregivers as well as malaria patients, who were selected across all the study locations. It was also observed how patients responded to malaria in order to gather first hand information on therapeutic choices and the perceptions of malaria care. Specifically, informants communicated key research issues such as local knowledge and the community conceptualization of malaria, beliefs associated with it, ways of diagnosing malaria, responses to its symptoms, care given to malaria patients and the pattern of utilization of both traditional and Western medical facilities.

[2] The sessions were moderated by the researcher and research assistant. A tape recorder was used to record the sessions. This was done in order to capture all the information offered through the sessions that may be missed by manual recording. The instrument consisted of open ended questions raised from the research questions.

Data raised in the field in the course of this research was analyzed through qualitatively using content analysis. Explanatory elaborations were undertaken on the information obtained from the field. Content analysis commenced with the transcription of recordings, followed by translations from the local dialect into English.[3]

III. Respondent Profile

As shown (table 1) a total of 120 people were involved in the field work. Of this number, 53% were females while 47% were males. The age range of the respondents was between 10 and 92 years. 20 people representing 18.3% of the respondents were single, 48 (40%) were married while 27 (22.5%) and 23 (19.2%) were widowed and divorced respectively. Educationally, 12 (10%) had not received a western education, 20 (16.6%) had attained only primary level, 50 (41.7%) had secondary level education and 38 (31.7%) had attained tertiary level of education. Ninety-three of the respondents (77.5%) were Christians, 26(21.7%) practiced traditional religions while only one (0.8%) of the respondents claimed to be an atheist. Occupationally, the respondents included artisans, housewives, civil servants, students and businessmen (women).

/N	Variables	Frequency	Percentages
	Age		
	10-19	26	21.7
	20-29	27	22.5
	30-39	14	11.7
	40-49	33	27.5
	50-59	7	5.8
	60 and above	13	0.8
	Total	120	100
	Sex		
	Male	53	44.2
	Female	67	55.8
	Total	120	100
	Religion		
	Christianity	93	77.5

[3] A full report of research will seek to include verbatim quotations so as to enrich the descriptive nature of such ethnographic research. A thick description of ethnographic events and contexts will be engaged in such a way that the full report will contain very minimal bias. Validity and objectivity of the presented data was guaranteed through ethnographic reflexivity.

	Traditional Religion	26	21.7
	Atheist	1	0.8
	Total	120	100
	Education		
	No formal	12	10
	Primary	20	16.6
	Secondary	50	41.7
	Tertiary	38	31.7
	Total	120	100
	Marital Status		
	Married	48	40
	Single	20	18.3
	Divorced	23	19.2
	Widowers	27	22.5
	Total	120	100
	Occupation		
	Student	22	18.3
	Traditional Healthcare provider	11	9.2
	Farmers	5	4.2
	Businessmen	10	8.3
	Civil Servant	20	20.8
	Artisans	16	13.3
	Healthcare provider	11	9.2
	Medicine Vendors	6	5
	Unemployed	8	6.7
	Clergymen	6	5
	Traders	5	4.2
	Total	**120**	**100**

The local Knowledge of Malaria

Among the Ibibio, malaria is mostly referred to as *uto enyinto* to signify a yellow colouring of the eyes. Taken together *utu enyin* and we have any sickness that brings about yellow discoloration of the eyes. The yellowness of the eyes/urine is indigenously believed to be caused by deposits of yellow substance from the sun, dust and/or yellow food items like oil and yellow fruits. Thus, it is believed that the treatment needed would be to wash off the yellow matter that causes the discoloration. This informs the idea of washing/bathing as an important measure against malaria, that is, the cleaning off of yellow substance, both inside the body and upon the skin.

Malaria is also known as *akom/adan*.[4] According to a respondent in Nsit Ibom L.G.A., "If oil enters anybody (i.e. if anyone suffers from malaria caused by oil), to treat it properly, you will have to purge to lighten up the stomach, then you bath with leaves or inhale the steam of the boiled leaves before taking any drug.[5]" Yet another name for malaria in local nomenclature is *akpa ndubi adaka ada ubahasen (*commonly shortened as *akpa ndubi).*Translated, is means to, 'die in the evening and rise up in the morning', this, being a description of the bouts of fever occasioned by malaria infection; more acute in the evening, through the night, but lessening in the morning. It is therefore seen as a minor health condition that does not affect a person's chores/duties. This belief informs the timing of some treatment regimes. Local oral remedies are often taken in the evenings with the aim of reducing the intensity of the fever at night and to help 'soften' the malaria residue the following morning. Washing occurs in the morning, which is aimed at cleansing both internal and external parts of the infected body. The concentration of the malaria 'matter' is, moreover, believed to have been stirred up by the fever and having been softened by the oral concoction admnistered the previous evening. As with *udongo ukang nnyin,* Malaria is believed to be an indigenous disease that is not preventable. A respondent clarified: *malaria is indigenous to our area. You can't prevent it no matter what you do; its cures are common knowledge and abound everywhe*re.[6] Yet another respondent emphasized: *any salt consuming* (normal/living) *person must have malaria*.[7]

When malaria is perceived as *ufiop idem,* (fever), it is believed that the best course of action is to bring down the body temperature of the patient. Bathing and drinking cold herbal tea is expected to suffice as treatment for such an episode of illness. Malaria is also sometimes referred to as *utu-eyin ekpo* (malaria caused by a ghost/spirit). This term is used when a particular episode of malaria is suspected to have gone beyond the ordinary, sensible sphere. Although *utu-enyin ekpo* is used bio-medically to refer to typhoid fever, the local belief is that typhoid is a more acute form of malaria that is caused either by spiritual attack, by one's enemies or as a punishment for wrong doing. This informs the resort to spiritual remedies from native doctors and in recent times the prayer houses of faith healers.[8]

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[4] *Adan*, is oil. Episodes of malaria referred to by this term, are believed to be caused specifically by oil

[5] Personal interview with Idongesit Akpan James in Uyo in March 2011

[6] Mr. Akpan Edet, a 57 years old herbalist interviewed during the fieldwork in May 15, 2010 at Ikono Urban.

[7] Mrs. Eka Nna, a 42 years old trader interviewed in Nsit Ibom in March 23, 2011.

[8] A number of local terms point to the role of malaria in childhood illnesses. For instance, *atuatuak or nkpo ntok eyen* refers to malaria resulting in convulsion in children. This is expected to be dealt with by herbal extracts of *utime nse / ntok idot nkong(obiok obung ndisa)*. In some cases, incantations are made to drive away the evil spirit that is frightening the child to make him/her convulse in fear. *Eka abasi* is used to refer to any episode of malaria in children associated with preter-natural causes. Such malaria are said to be caused by spirits or witchcraft.

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IV. The Local Perception of Malaria and Pathways to Care

While the interpretation of words may give rise to action and feeling, local diagnoses of malaria arise from inferences drawn from local names given to malaria in the Ibibio regions. Diagnosis is mostly based on the symptomatic or physical symptoms such as yellow discoloration of the eyes and urine; fever; headache; high body temperature; loss of appetite body itching; pains; nightmares; insomnia, and constipation. among others. A respondent observed that, "whenever anyone is sick or complains of discomfort, the first question he will be asked is 'how long is it since you last treated malaria'?"[9] As noted in the field during the observation of malaria episodes, there is a common knowledge of how the individual feels health wise. Ill-health due to malaria is often measured by the eyeball itself. When the eyeball appears pale and yellowish, accompanied by fatigue and yellow urine, the manifestation of malaria is real.[10]

Community folk tend to rely more on local remedies against malaria. This is informed by their holistic conception of health and illness, based on their cultural milieu. People see orthodox medicine as culturally alien and abstract since the processes of producing such medicines are not regionally known, unlike traditional treatments. 67 (55.8%) of the respondents believed that local remedies are more effective against malaria, 30 (25.1%) that orthodox medicine is more effective while 23 (19.8%) believed that for malaria to be effectively cured the traditional and western medicines must be combined. Most of those in the last group believe that local herbs must be taken first. As emphasised by a respondent, in malaria control, "you drink the local herbs first or use them for enema to purge the residue of malaria before you take the tablets.[11]"

At the onset of symptoms, the infected person(s) resume(s) disease culture, which includes a number of inabilities such as eating, sleeping, walking, playing, and other incapability suspending normal active practices and behaviours. As these inabilities create fear of economic loss, dissociation from the community functions, bewitch and possibility of death, both the infected and the relation engages in sick role including sourcing for care and supporting the patients in his/her sick behaviours. The conditions open up a pathway of care as shown in figure one below. The pathway involves the following four possible channels of care in malaria.

Stage 1: Home management with the use of traditional remedies

Stage 2: Self medication /Consultation with drug sellers

Stage 3: Consulting faith-based healing/traditional healers/ herbalists

Stage 4: Consulting Hospitals/health centres.

[10] Commonly, *anie uto enyin* will be expressed, meaning that the he/she has "yellowy" disease. To be sure, the body temperature will be measured using the back of the hand placed on the neck or chest.

[11] Interview with Helen Nelson Idey, in Itu on July 23, 2011.

Pathways of Malaria care in Ibibio

The stages in the pathway of malaria care in Ibibio land are not always followed serially, neither are they mutually exclusive. There are cases when a patient is being treated simultaneously with traditional remedies and orthodox drugs. It is not uncommon for a person to take enema with herbal extracts early in the morning before visiting the hospital for treatment. This leads to fatalities in some instances. Furthermore, there are cases where consultation with both faith-based healers and traditional healers are done hand in hand. While some people go through these stages one after the other, some can engage two or more of the stages at the same time. Others still can skip any of the stages or even revert to a particular stage that had been earlier engaged during the same illness episode. Syncretism, involving the creative combination of elements of traditional and western medicines based on the demands of each given situation is the dominant pattern of care seeking among the people.

V. Discussion and Conclusion

Western scientific idea of medicine otherwise known as bio-medical ideas of disease portrays malaria as an infectious disease caused by plasmodium parasites and transmitted through mosquito bites. Ibibio people hold the belief that malaria is caused by a plethora of different factors ranging from eating too much of oily foods, exposure to sunlight and witchcraft attacks. Based on this belief, interviews and observation indicate that the traditional ways in which malaria is managed are parallel to western/bio-medical ideas. The people repose much confidence in the

efficacy of traditional remedies. This is informed by factors such as the low economic status (Umanna, 2001), affordability and accessibility of the local remedies. Malaria management is a sort of "free-for-all". No individual is seen as an expert in the treatment of malaria. Though traditional healers often deify the substances they use in plying their trade, the reverse is the case with malaria remedies. Information about malaria is freely given to the next person. In instances of malaria attacks people do not hesitate to try out different remedies until, they stumble on the one that really works for them. This therefore promotes drug abuse and self-medication which is more prevalent in malaria management in Nigeria.

Hospital visits for malaria fever is quite low, especially in the rural areas. Most of those who go to the hospital for malaria care do so at an advanced stage of the disease when the disease might have set in complications. This occurs regularly as local remedies might have failed to give the patient relief from the illness. Others it was discovered do so just because they are expected but not out of conviction. They therefore go to the hospital only after having undergone traditional treatment regimes.

Continued reliance on traditional medicine for the treatment of malaria makes a strong case for the integration of traditional medicine into malaria care. It calls for attention by government and other stakeholders to look in the direction of supporting researches into the various traditional remedies used in the management of malaria. This would go a long way to ascertain the efficacy or otherwise of these remedies. It would also help to control the use of these remedies in order to stamp out hazardous practices among the people. The health of the people would be the better for it.

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