



Knowledge and Utilization of Traditional Medicines for the Management of Febrile Conditions by Adults in Bende Local Government Area of Abia State, Nigeria

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Abstract

Background: Fever is a rise in body temperature over and above the accepted normal temperature range. Fever is almost always a symptom or sign of an underlying health problem. Traditionally, different societies have devised various ways of treating fever or febrile illnesses. In Africa and most developing countries, people who develop fever usually apply first aid or home remedies before resorting to the formal health care system. This study was therefore aimed at assessing the knowledge and use of traditional medicines for the home management of febrile illness by adults in Bende LGA of Abia State. **Method:** A cross sectional questionnaire-based descriptive survey design was adopted for the study using a semi-structured self-administered questionnaire. A sample of 388 respondents were recruited using a multi stage sampling technique. Data generated were analyzed using statistical package for social sciences (SPSS version 20). Literature were reviewed based on the various variables of the study. **Results:** The findings of the study revealed that over 91% of respondents have good knowledge on febrile illness. The study also revealed a high proportion of use of traditional medicine with 154 (53.7%) using traditional medicine for the treatment of they consider as malaria. The study also showed that culture, religion, level of education, perceived effectiveness of herbal medicines, and personal interest were the major factors responsible for the utilization of traditional medicine.

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Majority 229(58.9%) of the respondents however affirmed that personal interest was the dominant reason for their use of traditional herbs in the home management of febrile illness. **Conclusions /Recommendations:** The findings of the study revealed the respondents in the study area exhibited a high prevalence of the use of herbal medicines in management of febrile illness at homes and that culture, religion, level of education, and personal interest were the key determinant factors responsible for the utilization of traditional medicine. While the herbal plants enumerated by the respondents were found to be largely beneficial in managing the acute febrile episodes, unregulated use of these home remedies could equally be dangerous to human health. It is therefore pertinent that appropriate measures be put in place to enlighten community members about the possible side effect of the long term unregulated use of the herbal plants.

Keywords: Knowledge; febrile illness; utilization; home management; home remedies.

1. Introduction

A febrile illness is a feverish condition usually associated with an infectious disease such as malaria, measles, acute respiratory infection, gastro-enteritis etc. In many parts of the world, especially in developing countries, the infectious causes of the febrile illness are poorly characterized largely due to limited diagnostic capabilities. Traditionally, malaria has been regarded as the most common and important febrile illness in Sub-Saharan Africa [1]. However, many of the physicians' diagnosis of febrile conditions in children also include pneumonia, diarrhea, and other medical conditions such as otitis media, and acute eye infections [2]. Fever is one of the most common symptoms reported by patients seeking health care in low-resource areas in the tropics, where it may occur either in isolation or in association with other common symptoms such as cough or diarrhea [3,4] Fever without localizing features presents a particular challenge to health care workers and health systems because it may be caused by a wide range of bacterial, fungal, parasitic, and viral infections [5,6]; as well as by noninfectious conditions. In most developing countries, the application of clinical methods in the assessment of febrile illness often has limited accuracy both for identifying the etiologic agent or factor; as well as the early recognition of febrile patients who could progress to more serious or fatal disease. Compounding the limitations of clinical assessment is the lack of available epidemiologic data on common causes of fever [5] and absence of clinical laboratory services in many areas [7,8] Given its prevalence and severity, malaria has been the common default diagnosis for fever without localizing features in the tropics for decades [9]. Malaria is the most common cause of fever in most tropical and sub-tropical countries claiming thousands of lives over the years. Traditional medicine refers to health practices, approaches, knowledge and beliefs incorporating plants, animals and minerals based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illness or maintain well-being [10] Traditional medicine variously known as ethno-medicine, folk medicine, native healing or complementary and alternative medicine is the oldest form of health care system that has stood the test of time. It is an ancient culture-bound method of healing that humans have used to cope and deal with various diseases that have threatened their existence and survival. Different societies have evolved different forms of indigenous healing methods that are captured under the broad concept of traditional medicine, example, Chinese, India and African traditional medicines. This may be the reason there is no universally accepted definition of term. The World Health Organization (WHO) defines traditional medicine as the sum total of the knowledge, skills and practices based on the theories, beliefs and

experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness [10]. Traditional medicine, according to the World Health Organization is the sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental or social imbalance, relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or written. WHO launched its first ever comprehensive traditional Medicine strategy in 2002 strategy to assist countries to gather and preserve knowledge on such practices with the hope to develop a good database for finding antimalarial properties in future in wake of drug resistance [10]. Majority of the people living in the rural areas of most developing countries have vast store of knowledge and practice of traditional medicines as it is cheaper and easily accessible to them. Traditional Medicine often becomes the first source of treatment for these communities. There are strong indications that traditional healthcare systems are still in use by majority of the people, not only in Africa, but across the world; [11] Examples of traditional healers are herbalists, diviners, faith healers, traditional surgeons, etc. All these traditional healers need information to support their work. Traditional medical practice illustrates the medical knowledge and practices, which have been improved over several centuries ago by a variety of societies before the era of modern Allopathic or Homeopathic Medicine began. It is estimated that over 70% of West Africans rely on traditional medicine or health care services for treatment of both communicable and non-communicable diseases [12]. According to the World Health Organization, traditional medicine usage for example, up to 80% of people in Africa and Asia use traditional health care services, in China, 50% of total medical consumption and 90% of Germans, 70% Canadians and 60% Swedes have used a natural remedy at some time [13]. Traditional medicine is also an affordable source of health in many countries. It is firmly embedded in the belief systems and can be termed culturally compatible [10]. Considering the fact that by the WHO estimation that 80% of the world's population use botanical medicines for their primary health care needs, malaria treatment inclusive [13], this study was therefore undertaken with the aim of finding out the knowledge and practices in the use of traditional medicines for the treatment of febrile conditions among adults in Bende Local Government Area of Abia State and the factors influencing such practices.

1.1. Statement of the problem

Febrile syndromes account for over 1 billion episodes annually and are one of the most common reasons for seeking medical care worldwide [14, 15]. Undifferentiated fever, also known as febrile illness, is the main clinical feature of many infectious diseases of worldwide public health importance [16,17]. Having a fever, defined as a rise in body temperature above the normal range of 36.5-37.5°C (97.7–99.5 °F), usually caused by infection, is one of the most common reasons people living in low- and middle-income settings seek healthcare [17] The global burden of febrile illness, and the contribution of many fever-inducing pathogens have been difficult to quantify and characterize. However, in sub-Saharan Africa it is clear that fever is a common symptom [18]. Malaria remains a major cause of fever, although its incidence has been steadily declining since 2003 [19,20]. In places where the presence of fever used to be equated with malaria, malaria rapid diagnostic tests (RDTs) have identified the often large proportion of febrile patients who do not have malaria. Diagnosis of individual patients with febrile illness is challenging, due to the non-specific presentation of a broad variety of conditions, and the lack of available diagnostic tests. Therefore, understanding the epidemiology of the causes

of fever has important implications for management of febrile patients. It is however the usual practice for people in developing countries to self-medicate i.e. do home management of febrile illnesses before resorting to qualified health care providers if there is no relief. This is what inspired this study to assess the utilization of traditional medication in the home management of febrile illness among adults in Bende Local Government Area of Abia State, Nigeria.

1.2. General objective

The major aim of this study was to assess the knowledge and utilization of traditional medication by adults in the home management of febrile illness in Bende LGA of Abia State, Nigeria.

1.2.1. Specific objectives

1. To determine the level of knowledge on the utilization of traditional medication in the home management of febrile illness in Bende Local Government Area.
2. To explore adults' perceptions on traditional medication in the home management of febrile illness in Bende Local Government Area.
3. To identify the factors that affects the use of traditional medication by adults in the home management of febrile illness in Bende Local Government Area.

1.3. Research questions

The following research questions were formulated for this study;

1. What is the knowledge base of adults in Bende LGA of Abia State on the utilization of traditional medication in the home management of febrile illness?
2. What is the perception of the adults in Bende LGA of Abia State about traditional herbs for the home management of febrile illness?
3. What are the factors that affect the utilization of traditional medication in the home management of febrile illness by adults in Bende LGA of Abia State?

1.4. Significance of the study

This study was meant to determine the types of traditional medicines used for the management of febrile illnesses by adults in the study area and the perceived benefits or adverse effects from its use. It was also meant to generate data to inform the government of its role in enlightening the general public, especially adults on the need to identify harmful or risky application of traditional medication for febrile illnesses.

2. Materials and Methods

2.1. Study setting

This research was carried out in Bende Local Government Area of Abia State in Nigeria. It is mainly an agricultural area noted for rice and yam production; and fishing. Bende is bounded in the North by Cross River State, Afikpo and Ohaozara in Ebonyi State, and in the south by Arochukwu and Ohafia. Thirteen (13) wards constitute the Local Government Area. The estimated population of the LGA is about 192, 111[21]

2.2. Scope of the study

The study was restricted to the utilization of traditional medication in the home management of febrile illness among adults in Bende LGA of Abia State.

2.3. Study design

A cross-sectional descriptive survey design was adopted for the study.

2.4. Study population

The study population comprised of male and female from 18 years and above who reside in Bende Local Government Area.

2.5. Sample size determination

The sample size was determined using the statistical formula by Bluman (2004) [22].

n =

n = required sample size

Z = level of confidence (1.96)

P = prevalence rate (50% or 0.5)

q = proportion of non-occurrence (100-p)

d = margin of error (standard value of 5%)

Substituting the values:

n = $\frac{1.96^2 \times 0.5(1-0.5)}{0.05^2}$

0.05²

$$n = \frac{3.8416 \times 0.5 \times 0.5}{0.0025}$$

$$n = \frac{0.9604}{0.0025}$$

$$n = 384$$

Applying a non-response rate of 10% of the sample size

$$\frac{n}{1 - \text{non response rate}}$$

$$\frac{384}{1 - 0.1}$$

$$\frac{384}{0.9}$$

$$n = 426$$

2.6. Sampling procedure

A multistage sampling technique was applied in selecting the respondents for the study.

Stage 1: Selection of wards

A total of six (6) wards were selected from the thirteen (13) wards in Bende Local Government Area using simple random sampling technique by the lottery method.

Stage 2: Selection of villages

The villages in each selected ward were numbered and using a lottery method, two (2) villages were randomly selected from the six (6) selected ward giving a total of twelve (12) villages.

Stage 3: Selection of households

A systematic sampling method, was used to select ten (33) households from each of the twelve (12) selected villages making a total of three hundred and ninety-six (396) households. This was achieved by using a fixed interval and a random starting point to select the households from the villages.

Stage 4: Selection of respondents

The researcher selected the respondents from each of the household. Although 396 households were identified, only a total of three hundred and eighty-nine (389) copies of questionnaire were retrieved from respondents who were willing to participate in the study.

2.7. Instrument for data collection

A semi structured self-administered pre-tested and validated questionnaire was used for data collection. The copies of questionnaire were prepared in English and comprised of four (4) sections (A-D) with twenty-three (23) questionnaire items in all. Section A comprised of the socio-demographic characteristics of the respondents. Section B comprised of knowledge level of respondents on febrile illness. Section C comprised of the perception of the respondents towards the use of traditional medication. While section D comprised of the factors that affects the use of traditional medication in the home management of febrile illness.

2.8. Method of data analysis

The data collected was analyzed using Microsoft Excel 2007 and presented as percentages in Tables and Figures.

2.9. Ethical considerations

Ethical clearance was given by the ethics committee of the Department of Public Health. Informed consents was also duly obtained from the respondents, who were assured of their confidentiality and their right to opt out of the study if they so decided.

3. Results

3.1. Socio-demographic characteristics of respondents

The socio-demographic characteristics of respondents are shown in Table 1, below. Majority, 117(30.1%) of the respondents were within the age bracket of 19 – 24 years, 103(26.5%) were of age group of 25 – 26 years, 82(21.1%) were between the age range of 31 – 36 years, 26(6.7%) were of the age bracket of 37 – 42 years while the rest of the respondents 61(15.7%) were either 40 years or above. Majority 155(39.8%) of the respondents have attained secondary school education; 107(27.5%) of the respondents were Bachelor degree holders, 62(15.9%) had obtained the National Certificate of Education (NCE); 29(7.5%) were Master degree holders while the remaining 34(8.7%) of the respondents were PhD. holders. Majority 192(49.9%) of the respondents were females while 138(41.8%) were males. On religion, majority 297(76.4%) of the recruited respondents were of the Christian faith, 58(14.9%) are Muslims, 32(8.2%) are traditionalist while the rest 2(0.5%) were members of other forms of religion. Regarding occupation, majority 117(30.1%) of the respondents were civil servants, 81(20.8%) were business men, 86(22.1%) were self-employed, 43(11.1%) were farmers. while 61(15.7%) were unemployed.

Table 1: Socio-demographic characteristics of respondents.

Variables	Frequency (n=389)	Percentage (100%)
Ages of the respondents (years)		
19 – 24 years	117	30.1
25 – 30 years	103	26.5
31 – 36 years	82	21.1
37 – 42 years	26	6.7
> 42 years	61	15.7
Education		
SSCE	155	39.8
NCE	62	15.9
B.Sc	107	27.5
M.Sc	29	7.5
PhD	34	8.7
Female	192	49.9
Male	138	41.8
Religion		
Christianity	297	76.4
Islam	58	14.9
Traditionalist	32	8.2
Other	2	0.5
Occupation		
Civil service	117	30.1
Business	81	20.8
Self-employed	86	22.1
Famer	43	11.1
Unemployed	61	15.7
Monthly earning		
N0.00 – N20,000.00	86	22.1
N20,001.00 – N50,000.00	86	22.1
N50,001.00 – N99,999.00	154	39.6
N100,000.00 and above	63	16.2

3.2. Respondents knowledge about febrile illness

The level of knowledge level of the respondents on febrile illness is shown in Table 2. Majority, 364(93.6%) of the respondents were knowledgeable about fever, with majority of them 355(91.3%) of them able to give a correct definition of what fever is. On the assessment of causes of fever, majority 325(83.5%) of the respondents indicated that fact that malaria causes fever, 19(4.9%) asserted also that measles and pneumonia could also cause fever while 17(4.4%) were of the opinion that some other illnesses can equally cause fever.

Table 2: Knowledge level of adult men and women on febrile illness.

Variables		Frequency (n=389)	Percentage (100%)
Have you heard of fever before	Yes	364	93.6
	No	25	6.4
Knowledge of fever	Knowledgeable	355	91.3
	Ignorant	19	4.9
Causes of fever	Malaria	325	83.5
	Measles	19	4.9
	Pneumonia	19	4.9
	Others	17	4.4

3.3. Respondents utilization of traditional medications for the home management of febrile illnesses

The respondents use of traditional medication in the home management of febrile illness in the study area is shown in Table 3. Majority of respondents 289(75.4%) had taken herbs at least once in their life-time; 154(53.7%) of the respondents have used herbs to treat malaria, 54(18.8%) have used it to treat diarrhea, 66(23.0%) for the management of typhoid fever, while about 13(4.3%) have used herbs for treatment of other forms of illness.

Table 3: Respondents use of traditional medication in the home management of Febrile illness in the study area.

Variables		Frequency (n=389)	Percentage (100%)
Have you taken herb before?	Yes	289	75.4
	No	100	24.5
For what condition did you use it for?	Malaria	154	53.7
	Diarrhoea	54	18.8
	Typhoid	66	23.0
	Others	13	4.5

3.4. Respondents perceptions about the utilization of traditional medications for the home management of febrile illnesses

Majority of the respondents 278(71.5%) were of the opinion that the herbs were useful in the management of their health condition. Incidentally, majority, 244(62.7%) of the respondents were not aware of any side effect of traditional herb, as opposed to 99(25.4%) who indicated that they were aware. Of the 99 of the respondents that were aware of the side effect of traditional herb, majority 32(27.3%) mentioned nausea as one of the side effect of traditional herb, 27(27.3%) stomach cramps, 12(12.1%) rashes, 13(13.1%) vomiting, and 15(15.1%) diarrhea. When asked if traditional medicines are dangerous to one's health, 146(37.6%) were in the affirmative, while majority 239(61.4%) stated that they were not aware. Among those that were of the opinion that traditional medicine is dangerous to one's health, about 65(44.5%) of the respondents indicated that there is a likelihood of overdose since traditional herbs are not prescribed by the doctor, 58(39.7%) were of the opinion

that there could be presence of toxins, while 23(15.8%) believed that the side effects are enough reasons for the danger. With regards to why they resort to the use of traditional medication first before seeking medical care, majority 222(57.1%) of them were of the opinion that people resort to traditional medication before going to the hospital due to personal reasons: 83(37.4%) stated that traditional medication have been proven to be effective against several local diseases; 65(29.3%) said it can treat a wide range of illness; 74(33.3%) noted that Western medicine were derived from traditional medicine. 182(46.8%) of the respondents indicated that they would approve the continuous use of herbal medicine for the treatment of fever, with 121(31.1%) disapproving its use; while 82(21.1%) approved occasional use of traditional herb, whereas some of the respondents said that they would approved the continuous use of herbs due to the fact that herbal medicines are cheap 95(24.4%), easy to prepare 50(12.9%), and are readily available 80(20.6%).

Table 4: Perceptions of respondents on the traditional medication used in the home management of Febrile illness in Bende Local Government Area.

Variables		Frequency (n=389)	Percentage (100%)
At the time of use did the herbs prove to be useful?	Yes	278	71.5
	No	8	2.1
Are you aware of any side effects of traditional herbs?	Yes	99	25.4
	No	244	62.7
What are those side effects?	Rashes	12	12.1
	Vomiting	13	13.1
	diarrhoea	15	15.1
	Nausea	32	32.3
	Stomach cramps	27	27.3
Are traditional herbs dangerous to one’s health?	Yes	146	37.6
	No	239	61.4
What are reason for traditional medicine been dangerous	Overdose	65	44.5
	Presence of toxins	58	39.7
	Side effects	23	15.8
Do people resort to traditional medication before going to the hospital?	Yes	222	57.1
	No	164	42.2
Reasons for the use of traditional medicine before going to hospitals	Proven to be effective	83	37.4
	Can treat wide range of illness	65	29.3
	Source of English drugs	74	33.3
Do you approve the continuous usage of herb for fever treatment	Yes	182	46.8
	No	121	31.1
	Occasionally	82	21.1
Why do you approve the continuous use of herb for fever treatment	It is cheap	95	24.4
	It is easy to prepare	50	12.9
	It is readily available	80	20.6

3.5. Factors responsible for the utilization of traditional medications in the home management of febrile illness

Majority 229(58.9%) of the respondents believed that personal interest could influence the use of traditional herbs in the home management of febrile illness, 209(53.7%) believed that cultural belief could equally influence one’s usage of herbal medications, 170(43.7%) considered religious factor, 118(30.3%) were of the opinion that fear of adverse effect can be contributory factor to the non-use of herbs, while 104(26.7%) were of the opinion that lack of knowledge of the constituents of the herbal preparation is another factor that could influence the use of traditional herbs in the home management of febrile illness as presented in Figure 1

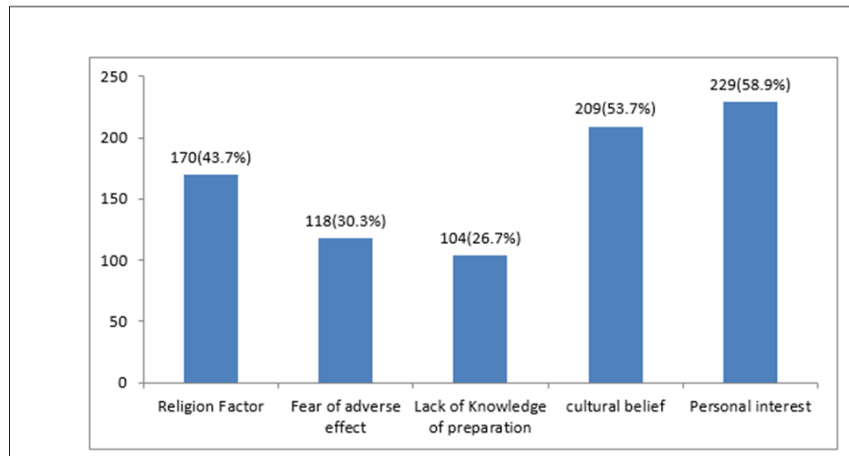


Figure 1: Factors responsible for the utilization of traditional medications in the home management of febrile illness.

3.6. Utilization of traditional medication in the home management of febrile illness in Bende Local Government Area

As shown in the Figure 2, 289(74.5%) of the respondents affirmed their use of herbs for the treatment of fever while the remaining 100(25.7%) do not take herbs.

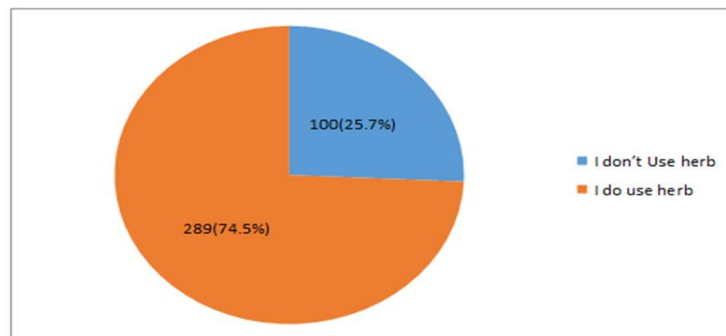


Figure 2: Utilization of traditional medicines for the home-management of febrile illnesses in the study area

3.7. The different Types of traditional medication used by respondents in the home management of Febrile illness in Bende Local Government Area

The different types of traditional medications used by respondents for the home management of Febrile illness in Bende Local Government Area are shown in Figure 3 below. Majority 117(30.1%) of the respondents indicated that they used the leaves of the neem tree which, an herbal tree known locally as “dogonyaro”.; this was followed by the use of lemon grass 75(19.3%), tea leaves 33(8.5%), guava leaves 29(7.5%), bitter leaves 25(6.4%) and scent leaves 7(1.8%).

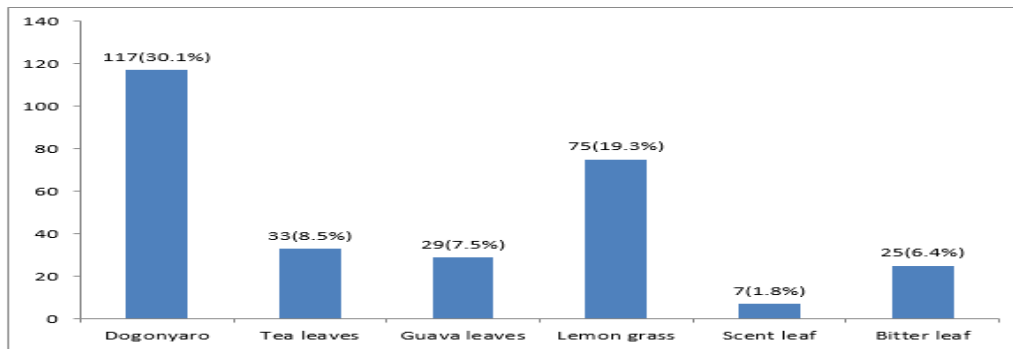


Figure 3: Types of traditional medication used by respondents in the home management of Febrile illness in Bende Local Government Area

4. Discussion

4.1. Knowledge level of male and female respondents on febrile illness

As noted by Boadu and Asase [23], traditional medicine is an essential component of the health care system of most Low and Middle (LMICS) income countries. However, the indigenous understanding about herbal medicines of many sub-Saharan African cultures has not yet been well investigated. The WHO Report [24] highlighted the fact that Malaria is the most common cause of fever in most tropical and sub-tropical countries claiming thousands of lives over the years. The result of the study showed that the respondents were knowledgeable about febrile illnesses. This may be due to the fact that Nigeria is within the malaria belt, and malaria being holo-endemic, is the most common endemic disease that causes febrile illness in Nigeria especially among vulnerable population groups including children under five years and pregnant women; for which they have to seek for treatment. WHO launched its first ever comprehensive traditional medicine strategy in 2002 with the aim of assisting countries gather and preserve knowledge on such practices with the hope of developing good database for herbs with antimalarial properties that could be deployed in future in the wake of drug resistance. Majority of the people living in the rural areas of most developing countries have vast stores of knowledge and practice of traditional medicines as it is cheaper and easily accessible to them. Apart from malaria, adults in Nigeria suffer from other causes of febrile illnesses including respiratory diseases such as pneumonia and tuberculosis as well as viral diseases such as influenza and HIV. The authors in [25-27] observed that some cases of clinically diagnosed malaria were also associated with other pathogens especially bacteria; the implication is that with the presumptive treatment of fevers as malaria, there could be some other

underlying or contributory causes of fevers which may be overlooked, that could lead to serious unwanted consequences. The over-diagnosis of most febrile illnesses in tropical African countries as malaria and its management at home with herbal preparations is usually associated with the missing of other possible causes of severe infection which could usually have been detected if the ailment was first reported to the formal health sector.

4.2. Perceptions of respondents on the use of traditional medication in the home management of febrile illness

Findings of the study showed that majority (75%) of the respondents had a fairly good perception of the use of traditional medicines for the home management of Febrile illness. According to Gao and his colleagues [28], the use of natural products as medicines must have presented a tremendous challenge to early humans. They opined that it is highly probable that in the search for food, early humans may have consumed poisonous plants which could have led to vomiting, diarrhea, coma, or other toxic reactions perhaps even death. However, through trial and error, early humans were able to develop knowledge about edible plants or herbs and natural medicines. Before the invention of the art and science of writing or printing on paper, ancient people wrote on pottery, papyrus or carved on rocks. This was however limited way of transferring knowledge. To a large extent, the transfer of knowledge from one generation to other in primordial cultures or societies was by oral tradition. Even with the advancements in human civilization and knowledge, some societies in Asia and Africa have maintained the age-long practice of using the oral tradition in passing knowledge from one generation to another. The finding from our study has shown that our respondents have fairly good knowledge about the use of herbal remedies for the home management of febrile illnesses and since most of these information is undocumented it stand to reason that the knowledge which may have been in the custody of their ancestors, could have been passed from one generation to another by oral tradition. The perception of the acceptability, convenience, and accessibility of traditional medicines [29] are key determinants in the use of traditional medicines in the home treatment of febrile illnesses by people in LMICS.

4.3. Factors responsible for the utilization of traditional medication in the home management of febrile illness

The findings of our study has revealed that culture, religion, level of education, perceived effectiveness of the herbal medicine, personal interest, low cost of herbal preparations were the major factors responsible for the utilization of traditional medicine by our respondents. In a study by Ekor [30], the researcher observed that the increasing cost of accessing orthodox medicine and services in developing countries has contributed to the widening of the health access gap, thereby increasing the inequity between the poor and the rich. The problem is further compounded by the inadequate and poorly equipped hospitals and clinics as well as the dearth of skilled healthcare providers. In some communities in the developing world, traditional medicine is the only source of healthcare delivery known to the community members that is readily accessible, acceptable and affordable. Evidences from studies [30-32], in Sub-Saharan Africa has shown that the preference for the use of traditional medicines in the home management of febrile illnesses is due to the fact traditional medicines are considered to be cheaper compared to allopathic medicines; and are seen to be within the economic reach of the

common people. The materials used in preparing the medicine are locally sourced and in some cases can be readily obtained at little or no cost, moreover, community members consider the work of traditional healers as a calling to humanitarian service and therefore they expect it to be of low cost.

4.4. Plants used as herbal medicines by our respondents for the home management of febrile illness

The study highlighted some plants or vegetation which the respondents asserted were used for the home management of febrile illness. These included: the Neem Tree, with a botanical name “*Azadirachta indica*” it is referred to the “Miracle tree” and in Nigeria, it is popularly called “Dogoyaro”, which is derived from one of the Nigerian dialects. Guava leaf from the guava tree with the botanical name “*Psidium guajava*”; Tea leaf with a botanical name “*Camellia sinensis*”; Lemon grass with a botanical name “*Cymbopogon citratus*”; The Bitter leaf which has the botanical name of “*Vernonia amygdalina*” and finally the Scent leaf know botanically as “*Ocimum gratissimum*”, the scent leaf is also known as “clove basil” or “African basil”. These plants mentioned by our respondents as local remedies used for the home management of febrile illnesses are found in abundance in Nigeria and most tropical or sub-tropical countries. Apart from their use in fever management, these plants have other health benefits. For instance, guava leaves which can be taken as tea drink is rich in antioxidants and vitamins which have some cardio-protective functions [33]. The Neem tree is very popular in Nigeria; The leaves have multiple health benefits while the Neem juice is well-known for ensuring overall health [34]. Bitter leaf is a widely available vegetation in Nigeria that is used both as food and as an herbal medicine. Bitter leaf has been found to reduce fever, because of an antipyretic compound that it contains. It is also thought to prevent cancer and to lower blood pressure [35]. Lemon grass is another common and widely used herbal remedy. It also called the fever grass, and has anti-inflammatory, analgesic, antiseptic, antipyretic and antibacterial properties and has been used for several centuries in the home management of various ailments. [36]

4.5. Conclusion /recommendations

Malaria is the most common febrile illness among children and adults in sub-Saharan Africa and in Nigeria in particular and traditional medicines have been used to treat malaria over several millennia. Based on the findings of the study, we concluded that the respondents in the study area are knowledgeable about febrile illness. They also have a good perception about the use of herbal medicines in the management of febrile illness at homes. Factors such as culture, religion, level of education, effectiveness, personal interest were the main determinants for the utilization of traditional medicine. In view of the inherent dangers and long term sequelae of the abuse of unregulated herbal products, it was recommended that measures should be put in place to deal with the challenges associated with the quality assurance of herbal preparations in order to ensure their efficacy and safety.

4.6. Limitations of the study

The study has some limitations in that we did not disaggregate the data by gender to determine which of the two genders (males or females) reported the highest proportion of utilization of traditional medicines. We also did

not assess the role of socioeconomic factors such as income and educational levels on the utilization of the traditional medicines for the home management of febrile illnesses.

4.7. Suggestion for further studies

There is a wide scope for research in the use of traditional or herbal preparations for managing health conditions at home however safety concerns should be addressed. Further studies on the determinants of traditional medicine use in developing countries should investigate relationships between household income and traditional medicine use. For example, it is crucial to understand if rising income in developing countries will lead to an increase or reduction in the use of traditional medicine or not.

5. Declaration of Interest

None

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