FACTORS INFLUENCING MALARIA AND TYPHOID TREATMENT AND HEALTH SEEKING BEHAVIOR AMONG RURAL DWELLERS IN EKITI STATE, NIGERIA

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Abstract

Malaria and typhoid are two leading illnesses that have great impact on rural dwellers due to limited access to clean water and sanitation facilities, inadequate healthcare services, poor living conditions, and low socioeconomic status. This study examined the factors influencing malaria and typhoid treatment and health seeking behaviour among rural dwellers in Ekiti State, Nigeria. The study was a cross-sectional research that employed mixed methods, including quantitative and qualitative. The quantitative data was collected from 383 respondents while qualitative data was generated from 18 individuals. The quantitative data was analyzed using SPSS software package version 25.0 and presented using descriptive and inferential statistics while the qualitative data was analyzed using content analysis and discussed alongside the quantitative data. The findings showed that all the respondents (100%) are knowledgeable of the symptoms, causes and treatment of malaria and typhoid. The study found that 88.4% of the respondents preferred to use modern medicines (drugs and injection) and traditional medicine methods to treat malaria and typhoid diseases. The study also found that 63.1% of respondents identified cost of treatment, nature of illness, and efficacy of treatment as the significant factors influencing malaria and typhoid treatment and health-seeking behavior. Additionally, the findings revealed that low income (85.6%), nature of illness/environment (84.3%), patient's occupation (75.2%), and place of residence (72.6%) were the most significant factors influencing malaria and typhoid treatment and health-seeking behavior. It recommended that government should encourage the collaboration between allopathic medicine and indigenous African medicine.

Keywords: Drug; health facilities; health services providers; non-communicable diseases; primary health care.

1. INTRODUCTION

Malaria and typhoid are illnesses that affect the wellbeing of mankind. They are two leading illnesses that have great impact on the people living in the poor communities, particularly, rural areas in Africa (Oladimeji, et. al., 2018; Akinyemi, et. al., 2018). Malaria is caused by Plasmodium parasites and it is transmitted through mosquito bites, is a leading cause of morbidity and mortality in Africa (Nas, et. al., 2017). Typhoid, caused by Salmonella Typhi bacteria, is another significant public health concern, with millions of cases reported annually worldwide (Antillon, et. al., 2017). Both diseases have overlapping symptoms, including headache, fever, and vomiting. Approximately 395,000 malaria-related deaths occur annually in Africa, with children under 5 years accounting for 74% of all malaria deaths (WHO, 2015). The global burden of malaria and typhoid diseases is substantial. WHO (2017) further reported 207 million cases of malaria and 627,000 deaths in 2013, while typhoid cases were estimated at 21 million. More recent data indicates that in 2020, there were 241 million cases of malaria, compared to 227 million in 2019, and 26 million cases of typhoid, resulting in an estimated 215,000 deaths (WHO, 2020; Center for Disease and Control, 2020).

Malaria and typhoid diseases are significant public health concerns, contributing to high mortality rates, particularly in rural areas of Nigeria (Simon-Oke & Akinbote, 2020). Nigeria bears a disproportionate burden of these diseases, with the highest incidence and prevalence of malaria and typhoid cases worldwide in 2019 (27% of global malaria cases) (WHO, 2020; Simon-Oke & Akinbote, 2020). However, the exact rate of typhoid occurrence in Nigeria is difficult to determine due to poor documentation and inadequate surveillance systems. The majority of Nigerians reside in rural communities, which are characterized by limited access to clean water and sanitation facilities, inadequate healthcare services, poor living conditions, and low socioeconomic status (United Nations, 2022). As of 2020, approximately 99 million Nigerians (99,033,580) lived in rural areas, representing a 0.89% increase from the previous year (United Nations, 2022). Malaria and typhoid diseases are prevalent among rural dwellers in Nigeria (Nigeria Demographic and Health Survey, 2018).

Individuals' treatment behavior is concerned with the willingness to seek help when a person falls sick. However, poor treatment behavior has been shown to be responsible for inadequate prevention and control of death associated with health conditions (Nas, et al., 2017). Cultural beliefs about illnesses, self-medication, and traditional medicine are perceived as significant factors influencing individuals' treatment behaviors in rural communities (Akpenpuun & Mpem, 2015). Despite the high prevalence of malaria and typhoid diseases in rural areas of Nigeria, there is a paucity of research on the health-seeking behavior of rural dwellers in Southwest Nigeria. This study aims to fill this knowledge gap by examining the factors influencing health-seeking behavior in the treatment of malaria and typhoid in Ekiti State, Southwest Nigeria.

Research Questions

1. What is the knowledge of rural dwellers on malaria and typhoid in Ekiti State, Nigeria?
2. What are the various methods of treatment of malaria and typhoid among rural dwellers in Ekiti State, Nigeria?
3. What are the factors influencing the treatment and health seeking behaviour among rural dwellers in Ekiti State, Nigeria?

Research Objectives

1. examine the knowledge of rural dwellers on malaria and typhoid in Ekiti State, Nigeria;

2. identify the various methods of treatment of malaria and typhoid among rural dwellers in Ekiti State, Nigeria; and
3. identify the factors influencing the treatment and health seeking behaviour among rural dwellers in Ekiti State, Nigeria.

Research Hypotheses

Ho1: Knowledge of rural dwellers is not significantly related to health seeking behaviour for malaria and typhoid treatment among rural dwellers in Ekiti State, Nigeria.
Ho2: People's belief about illness is not significantly related to health seeking behaviour for malaria and typhoid treatment among rural dwellers in Ekiti State, Nigeria.

2. LITERATURE REVIEW

Malaria and typhoid are common diseases that have great impact on the population of Nigeria. Akpenpuun and Mpem (2015), malaria symptoms include headache, tiredness, muscle and joint aches, high temperature, fever, among others, while typhoid symptoms include headache, prolonged fever, malaise, constipation, intestinal puncture, abdominal pains and neurological complications (WHO, 2020; Ozakpo & Olugasa, 2021). Research had shown that malaria is typically caused by mosquito bites associated with *Plasmodium falciparum',* which is the most deadly of the four human malaria parasites that accounts for the deaths of millions of people yearly (WHO, 2017). Additionally, typhoid disease is associated with several inherent factors including inadequate water supply, poor sanitation, urbanization, regional movement of a large number of migrant workers, among other factors (Akinyemi, et. al., 2018).

Furthermore, Adams and Aighokhaode (2018) identified factors affecting the health and health-seeking behaviour of rural residents, including socio-cultural background, education level, family size, and nature of the disease. disability, availability of traditional health care in the environment; limited access to quality health services; availability of experts; low income and direct funding of health services. Additionally, Uche (2017) claimed that the nature and severity of the disease, economic factors (especially cost of treatment), religious beliefs, education level, age, gender of the patient, culture, organizational factors, patient's age, patient's gender, and other organizational factors. Other scholars, including Adongo (2018) and Adewoye, *et. al*., (2019) have also identified the factors influencing treatment seeking, which include distance to health facility, cost of treatments, decision of the care takers at home, knowledge of the health seeking, household income, caretaker's level of education and choice of healthcare provider. Furthermore, Metiboba (2021) has suggested that the use of both modern medicine (such as drugs, injection, etc) and traditional medicine (like herbal remedies, etc) should be harmonized in the healthcare services in Nigeria.

Theoretical Framework: *Health Belief Model (HBM)*

The Health Belief Model (HBM) is a widely used theoretical framework in public health that explains health behavior and decision-making processes. Developed by Hochbaum, Rosenstock, and Kogels in the 1950s, the HBM posits that individuals' health behaviors are influenced by their perceptions of susceptibility, severity, benefits, and barriers to taking action (Rosenstock, 1994).The HBM consists of four (4) main variables: (i) perceived susceptibility, the individual's belief that they are at risk of contracting an illness; (ii) perceived seriousness, the individual's perception of the consequences of an illness; (iii) perceived benefits of taking action, the individual's belief that taking action will prevent or reduce the risk of an illness; and (iv) perceived barriers of taking action, the individual's perception of the obstacles or challenges that may prevent them from taking action.

According to the HBM, individuals will act to prevent or treat an illness when they perceive a high level of susceptibility and severity, believe that taking action will be beneficial, and perceive few barriers to taking action. For this study, therefore, the Health Belief Model (HBM) provides a framework for understanding the factors that influence health-seeking behavior in the treatment of malaria and typhoid in Ekiti State, Southwest Nigeria. The model helped to explain why some individuals may not seek medical treatment for malaria and typhoid, despite the availability of effective treatments.

3. METHODOLOGY

The study was a cross-sectional research design. It employed a mixed-methods approach, combining both quantitative and qualitative methods to investigate the factors influencing health-seeking behavior in the treatment of malaria and typhoid among rural dwellers in Ekiti State, Southwest Nigeria. Ekiti State, Nigeria, was selected as the study area due to its high rural population, with approximately 75% of its 3.3 million residents living in rural areas (National Bureau of Statistics, 2017). The study population consisted of rural dwellers aged 18 years and above, with a sample size of 400 calculated using the Taro Yamane model (1967). For the qualitative component, 12 rural dwellers and 6 health workers were purposively selected to participate in in-depth interviews and key informant interviews. A multi-stage sampling method was employed for the quantitative component, involving the stratification of Ekiti State into three senatorial districts, followed by the random selection of local government areas (Irepodun/Ifelodun; Ido-Osi; and Gbonyin LGAs) and rural communities (Igbemo-Ekiti; Esure-Ekiti; and Ijan-Ekiti). In contrast, the qualitative component employed purposive sampling, selecting participants based on their experience and knowledge of malaria and typhoid treatment. Data collection for the quantitative component involved the administration of questionnaire to respondents through field assistants employed and trained for the purpose, while the qualitative component employed in-depth interviews and key informant interviews conducted using a tape recorder. The questionnaire was designed to collect data on socio-demographic characteristics, knowledge, awareness, and health-seeking behaviour regarding malaria and typhoid. Data analysis involved the use of SPSS software version 25.0, with descriptive and inferential statistics employed to present the data while the qualitative component employed content analysis. Finally, ethical considerations were ensured throughout the study, with ethical approval obtained from the department and informed consent obtained from respondents. Confidentiality and anonymity were also ensured to protect the rights and privacy of participants.

4. RESULTS

Socio-demographic Characteristics of Respondents

Table 1: Respondents Socio- Demographic Characteristics (N=383)

SN	Variables	Socio-Demographic Characteristics	Frequency (N= 383)	Percentage (%)
1.	Gender	Male	196	51.2
		Female	187	48.8
2.	Age (in years)	18 – 20	16	4.2
		21 – 30	119	31.0
		31 – 40	132	34.5
		41 – 50	65	17.0
		51 – 60	12	3.1
		61 years and above	39	10.2
		Mean age: 31years		
3.	Religion	Christianity	192	50.1
		Islam	153	40.0
		Traditional	33	8.6
		Others	5	1.3
4.	Ethnic group	Yoruba	255	66.6
		Igbo	69	18.0
		Hausa	16	4.2
		Others (like Ebira, Idoma, etc)	43	11.2
5.	Level of education	No formal education	8	2.1
		Primary	46	12.0
		Secondary	135	35.2
		Post secondary	194	50.7
6.	Marital status	Single	110	28.7
		Married	207	54.1
		Separated	23	6.0
		Divorced	20	5.2
		Widowed	23	6.0
7.	Occupation	Public workers	51	13.3
		Private workers	43	11.2
		Farmers	240	62.7
		Unemployed	49	12.8

Field Survey, 2023

Table 1 presents the socio-demographic characteristics of respondents. From the table, slightly more than half (51.2%) of the respondents were male; majority (82.5%) of the respondents were between 21 and 50 years of age with a mean age of 31years. About two-thirds (66.6%) of the respondents were Yoruba; a large proportion (85.9%) of the respondents had secondary and post-secondary education; more than half (54.1%) of them were married; and a significant proportion (62.7%) of them were farmers.

Knowledge of Malaria and Typhoid among Rural Dwellers in Ekiti State

Table 2, 3 and 4 presents data relating to the knowledge of malaria and typhoid among rural dwellers in Ekiti State (e.g. knowledge, source of knowledge, causes, symptoms and treatments options).

Table 2: Knowledge of Malaria and Typhoid among Rural Dwellers in Ekiti State (N=383)

Knowledge of Rural Dwellers on Malaria and Typhoid	f	%
Have you heard about malaria and typhoid fever before		
Yes	383	100.0
No	-	-
If yes, how do you know about the diseases		
Radio	184	48.0
Television	45	11.8
Social media platforms	37	9.7
Through experience	102	26.6
Through my job	15	3.9

Field Survey, 2023

From the data in Table 2, it can be observed that all the respondents have heard about malaria and typhoid fever, its causes, mode of transmission and measures to prevent it. For instance, the table revealed that all the respondents (100%) agreed to have heard about malaria and typhoid fever before, particularly through radio (48%); experience (26.6%); televisions (11.8%); social media platforms (9.7%); and through their job (3.9%). The research finding was supported by the submissions of some of the participants of the in-depth interview (IDI) conducted. One of the respondents said:

> *Malaria and typhoid fever are the most common illness among children and adult alike. Malaria often occurs mostly as a result of mosquito bites, stress, among others. The most common channel where people know about malaria and typhoid is through the radio, television, internet or social media among others* (IDI: Female, 42years, Christian, Married, B.Ed, Teacher, Esure-Ekiti).

Table 3: Knowledge of the Causes of Malaria and Typhoid among Rural Dwellers in Ekiti State (N=383)

Knowledge of the Causes of Malaria and Typhoid Diseases	f	%
What are the causes of malaria disease		
Parasites	39	10.2
Mosquitoes bites	168	43.8
Dirty environment	49	12.8
Use of shared needles or syringes	8	2.1
Through transplant	31	8.1
Through transfusion	39	10.2
All of the above	49	12.8
What are the causes of typhoid disease		
Bacteria	186	48.6
Consumption of contaminated water	66	17.2
Using toilet contaminated with bacteria	53	13.8
Consumption of food washed in contaminated water	28	7.3
All of the above	50	13.1

Field Survey, 2023

Additionally, Table 3 presents the knowledge of the causes of malaria and typhoid diseases. On the causes of malaria disease, the respondents identified mosquito bites (43.8%); dirty environment (12.8%); parasites (10.2%); through transfusion (10.2%); through transplant (8.1%); use of shared needles or syringe (2.1%); and all the above-mentioned causes (12.8%). Similarly on the causes of typhoid, the respondents identified bacteria (48.6%); consumption of contaminated water (17.2%); using toilet contaminated with bacteria (13.8%); consumption of food washed in contaminated water (7.3%); and all the above mentioned causes (13.1%). Thus, some of the interviewees corroborate the findings by identifying some common causes of malaria and typhoid fever among the people in the rural communities. One of the respondents interviewed claimed that:

> *Malaria and typhoid fever are very common diseases in this part of the country, unlike the northern states where polio incidence is high. However, there are many causes of malaria and typhoid, but the most common cause of malaria is mosquito bites, while the cause of typhoid is mainly due to ingestion of raw food or food infected with bacteria and germs* **(IDI: Male, 45years, Islam, Married, MBA, Civil Servant, Ijan Ekiti).**

Table 4: Knowledge of the Symptoms of Malaria and Typhoid among Rural Dwellers in Ekiti State (N=383)

Knowledge of the Symptoms of Malaria and Typhoid Diseases	f	%
What are the symptoms of malaria		
High fever	133	34.7
Sweating	23	6.0
Headache/muscle ache	68	17.8
Diarrhea/ Nausea/Vomiting	45	11.7
Cough	8	2.1
Tiredness	50	13.1
Coma	4	1.0
All of the above	38	9.9
Others (e.g. dizziness, etc)	14	3.7
What are the symptoms of typhoid		
Fever	98	25.6
Loss of appetite	12	3.1
Headache	31	8.1
Shaking chills	57	14.9
Cough	15	3.9
Vomiting	7	1.8
Stomach/abdominal pain	14	3.7
Muscle aches	24	6.3
All of the above	117	30.5
Others (e.g. dizziness, hot stomach, etc)	8	2.1

Field Survey, 2023

Table 4 presents the knowledge of the symptoms of malaria and typhoid diseases among rural dwellers in Ekiti State. From the Table, the respondents identified high fever (34.7%); headache/muscle ache (17.8%); tiredness (13.1%); diarrhea/nausea/vomiting (11.7%); sweating (6%); cough (2.1%); coma (1.1%); all the symptoms (9.9%); and others such as dizziness, etc (3.7%). Likewise on the symptoms of typhoid fever, the respondents identified fever (25.6%); shaking chills (14.9%); headache (8.1%); muscles ache (6.3%); cough (3.9%);

stomach/abdominal pain (3.7%); loss of appetite (3.1%); vomiting (1.8%); all the above-mentioned symptoms (30.5%); and others such as hot stomach, dizziness, etc (2.1%). Indeed, the research findings are in tandem with some of the participants of the interviews. Most of the interviewees identified fever, headache, cold and tiredness as some of the symptoms of malaria while the most favoured symptoms of typhoid by most of the interviewees were fever, cold, shaking chills and cough. One of the interviewees said:

> *Malaria and typhoid fever are diseases that are common among humans but it curable and treatable. The symptoms that I know that often show when one has fever include headache, hotness of the body, cold, hotness from the inner stomach, etc* (IDI: Female, 44years, Christian, Married, Secondary school, Igbemo- Ekiti)

The study's findings suggest that rural dwellers in Ekiti State have a high level of understanding and knowledge about malaria and typhoid, including causes, symptoms, modes of transmission, preventive measures, and treatment options. This knowledge is a significant determinant of their treatment and health-seeking behavior, indicating that informed individuals are more likely to make informed decisions about their health. Thus, the implication of this finding is that health education programs and interventions can be effective in promoting positive health behaviors among rural dwellers.

Table 5: Methods of treatment of Malaria and Typhoid among Rural Dwellers in Ekiti State (N=383)

Methods of treatment of Malaria and Typhoid Diseases	f	%
How can the malaria/typhoid diseases be treated?		
Clinic/Hospital	171	44.6
Traditional medicine	128	33.4
Spiritualist	42	11.1
Traditional healer/herbalist	12	3.1
All of the above	30	7.8
What are the various methods of treatment of malaria/typhoid?		
Use of drugs	114	29.8
Injection	97	25.3
Herbs	71	18.5
Use of concoction	23	6.0
Prayers	35	9.2
All of the above	43	11.2

Field Survey, 2023

Table 5 presents the methods of treatment of malaria/typhoid diseases. The study's findings revealed that rural dwellers in Ekiti State employ a range of methods to treat malaria and typhoid diseases. The majority of respondents (78%) preferred seeking treatment at clinics or hospitals and traditional medicine. The use of modern medicine such as drugs and injections (55.1%) was also prevalent. In addition to modern medicine, traditional methods of treatment and spiritual healing homes were also widely used; including herbs (18.5%), concoctions (6%), visiting traditional healers or herbalists (3.1%), spiritual healing (11.1%) and prayers (9.2%) are also popular. The study's findings indicate that individuals utilize both modern medical approaches (clinics/hospitals, drugs, and injections) and traditional medicine (herbs and concoctions) to treat malaria and typhoid fever. This dual approach suggests that individuals may be seeking relief from symptoms and treatment options that align with their beliefs, experiences, and cultural practices. In conclusion, the study's findings highlight the

importance of understanding the diverse treatment approaches used by individuals to manage malaria and typhoid fever. By acknowledging and addressing these differences, healthcare providers can deliver more effective and culturally sensitive care.

Factors influencing Malaria and Typhoid Treatment and Health Seeking behaviour

Table 6 and 7 presents the factors influencing malaria and typhoid treatment and health seeking behaviour of rural dwellers in Ekiti State, Nigeria.

Table 6: Factors influencing malaria and typhoid treatment and health seeking behaviour of rural dwellers in Ekiti State, Nigeria (N=383)

Factors influencing Malaria and Typhoid Treatment and Health Seeking Behaviour of rural dwellers in Ekiti State, Nigeria	f	%
Do you think there are factors influencing malaria and typhoid treatment and health seeking behaviour?		
Yes	305	79.6
No	78	20.4
What are the factors you know?		
Sex of patient	23	6.0
Religious belief	15	3.9
Age	23	6.0
Culture/Tradition	31	8.1
Cost of treatment	113	29.5
Availability of drugs	19	5.0
Social environment	23	6.0
Nature of illness	66	17.2
Efficacy of treatment	63	16.4
Patient's socio-economic background	7	1.8
Which of these factors is applicable to you most?		
Age	8	2.1
Religion	28	7.3
Sex of patient	63	16.4
Efficacy of treatment	56	14.6
Patient's socio-economic background	49	12.8
Culture/Tradition	31	8.1
Availability of drugs	15	3.9
Distance from health facilities	20	5.2
Social environment	12	3.1
Nature of illness	101	26.4

Field Survey, 2023

Table 6 presents respondent's responses on the factors influencing malaria and typhoid treatment and health-seeking behavior among rural dwellers in Ekiti State, Nigeria. The table showed that a significant majority (79.6%) of respondents agreed that there are factors influencing malaria and typhoid treatment and health-seeking behaviour. Furthermore, the most significant factors identified by respondents were cost of treatment (29.5%), nature of illness (17.2%), and efficacy of treatment (16.4%). Other factors influencing malaria and typhoid treatment and health-seeking behavior included culture/tradition, social environment,

age, sex of patient, availability of drugs, religious belief, and patient's socio-economic background. More than three-fifths (63.1%) of respondents identified cost of treatment, nature of illness, and efficacy of treatment as the most important factors influencing malaria and typhoid treatment and health-seeking behavior. Furthermore, 70.2% of respondents identified nature of illness, sex of patient, efficacy of treatment, and patient's socio-economic background as significant factors (see Table 6).

Table 7: Influences of income, patient's occupation and place of residence on Malaria and Typhoid Treatment and Health Seeking Behaviour among Rural Dwellers (N=383)

Influences of income, patient's occupation and place of residence on Malaria and Typhoid Treatment and Health Seeking Behaviour among Rural Dwellers	**f**	**%**
Do you think low income determines malaria and typhoid treatment and health seeking behavior among rural dwellers?		
Yes	328	85.6
No	55	14.4
Do you think low patient's occupation is a determinant of malaria and typhoid treatment and health seeking behavior among rural dwellers?		
Yes	288	75.2
No	95	24.8
Do you think patient's place of residence is a determinant of malaria and typhoid treatment and health seeking behavior among rural dwellers?		
Yes	278	72.6
No	105	27.4
In your own view, what exactly determines malaria and typhoid treatment and health seeking behavior among rural dwellers?		
Cost of income	35	9.1
Nature of disease/environment	288	84.3
Not taking care of oneself	11	2.9
Individual perception & belief	38	9.9
Efficacy of treatment	11	2.9

Field Survey, 2023

Table 7 presents respondent's responses on the influences of income, patient's occupation, and place of residence on malaria and typhoid treatment and health-seeking behavior. The table showed that low income (85.6%), nature of disease/environment (84.3%), patient's occupation (75.2%), and place of residence (72.6%) were significant factors influencing malaria and typhoid treatment and health-seeking behavior. The findings reveal that individuals use various methods to treat malaria and typhoid fever, including visiting clinics/hospitals and using traditional medicine such as herbs and concoctions. This suggests that individuals have different preferences and approaches to managing their health, which may be influenced by cultural, social, and economic factors.

In conclusion, the study's findings highlight the complexity of treatment options for malaria and typhoid fever, emphasizing the need for a patient-centered approach that considers individual preferences and needs. By understanding the diverse treatment options used by individuals, healthcare providers can promote safe and effective care.

Hypotheses

$H_0$1 - Knowledge of rural dwellers is not significantly related to malaria and typhoid treatment and health seeking behaviour among rural dwellers.

Descriptive Statistics

	Mean	Standard Deviation	N
Knowledge of rural dwellers	17.4778	2.58244	383
Malaria/typhoid treatment and health seeking behavior	13.7258	5.54142	383

Table 8: Pearson's Correlation showing the relationship between Knowledge of Rural Dwellers and Malaria and Typhoid Treatment and Health Seeking Behaviour

		Knowledge of rural dwellers	Malaria/typhoid treatment and health seeking behaviour
Knowledge of rural dwellers	Pearson Correlation	1	.477**
	Sig. (2-tailed)		.000
	N	383	383
Malaria/typhoid treatment and health seeking behavior	Pearson Correlation	.477**	1
	Sig. (2-tailed)	.000	
	N	383	383

**. Correlation is significant at the 0.05 level (2-tailed).

The study tested the hypothesis that knowledge of rural dwellers is not significantly related to malaria and typhoid treatment and health-seeking behavior. However, the data revealed a significant relationship between knowledge and treatment/health-seeking behavior. The results showed a P-value of 0.477, which is significant at the 0.05 level. This indicates that the knowledge of rural dwellers is a significant determinant of malaria and typhoid treatment and health-seeking behavior in Ekiti State.

$H_0$2 - People's belief about illness is not significantly related to malaria and typhoid treatment and health seeking behaviour among rural dwellers.

Descriptive Statistics

	Mean	Standard Deviation	N
People belief about illness	9.7206	1.91242	383
Malaria/typhoid treatment and health seeking behavior	13.7258	5.54142	383

Table 9: Pearson's Correlation showing the relationship between People's Belief about Illness and Malaria and Typhoid Treatment and Health Seeking Behaviour

		People belief about illness	Malaria/typhoid treatment and health seeking behavior
People belief about illness	Pearson Correlation	1	.361**
	Sig. (2-tailed)		.000
	N	383	383
Malaria/typhoid treatment and health seeking behavior	Pearson Correlation	.361**	1
	Sig. (2-tailed)	.000	
	N	383	383

**. Correlation is significant at the 0.05 level (2-tailed).

The study tested the hypothesis that people's beliefs about illness are not significantly related to malaria and typhoid treatment and health-seeking behavior among rural dwellers. However, the data revealed a significant relationship between belief and treatment/health-seeking behavior. The results showed a P-value of 0.361, which is significant at the 0.05 level. This indicates that the beliefs of rural dwellers significantly determine malaria and typhoid treatment and health-seeking behavior in Ekiti State.

5. DISCUSSIONS

The level of understanding and knowledge about malaria and typhoid among the respondents was high, as most of them knew the causes, symptoms, modes of transmission and preventive measures, and knew that this disease is preventable and curable. The results correlate with the submissions of Akpenpuun and Mpem (2015); WHO (2020) and Ozakpo and Olugasa (2021). Akpenpuun and Mpem (2015) identifed malaria symptoms to include headache, tiredness, muscle and joint aches, high temperature, fever, among others, while WHO (2020) and Ozakpo and Olugasa (2021) who identified typhoid symptoms to include headache, prolonged fever, malaise, constipation, intestinal puncture, abdominal pains and neurological complications.

Furthermore, the result of the findings on the various methods of treatment to include the use the Clinic/Hospital and traditional medicine such like herbs and concoction for the treatment of malaria and typhoid fever. This finding corresponds with the submission of Metiboba (2021) that the dual approach to treatment should be embraced and utilizes to improve healthcare outcomes in Nigeria. The study also found that the factors influencing health seeking behavior of rural dwellers in Ekiti State, Nigeria were nature of illness/disease, cost of treatment, efficacy of treatment and patient's socio-economic backgrounds like occupation, income and place of residence, which are in tandem with the reports of Uche (2017) and Adams and Aighokhaode (2018). Uche (2017) identified the nature and severity of the disease, economic factors (especially cost of treatment), religious beliefs, education level, age, gender of the patient, culture, organizational factors, patient's age, patient's gender, and other organizational factors as the factors influencing health-seeking behaviour. Adams and Aighokhaode (2018) also identified socio-cultural background, education level, family size, and nature of the disease. disability, availability of traditional health care in the environment;

limited access to quality health services; availability of experts; low income and direct funding of health services as factors affecting the health-seeking behaviour of rural residents.

6. CONCLUSION & RECOMMENDATIONS

Considering the findings of the study, it was concluded that socio-cultural and economic factors should be considered when planning towards reducing the incidences of malaria and typhoid in rural areas in Nigeria. Consequently, it is recommended that since the level of knowledge about malaria and typhoid is good, people in rural areas of Ekiti State need to maintain the status quo to reduce the number of cases of malaria and typhoid in the state. Thus, regular health education programs, community outreach initiatives, or peer-to-peer education could be implemented to reinforce existing knowledge and promote healthy behaviors.

Also, since there are various methods of treatment of malaria and typhoid fever, government should encourage collaboration between allopathic medicine and indigenous African medicine. This will result into improved treatment outcomes or increased access to healthcare and by ensuring the safety and efficacy of indigenous African medicine, which is crucial for protecting public health. Lastly, the rural dwellers should be educated and advised to always use the treatment option that is more effective in tackling malaria and typhoid diseases. Thus, effective education and sensitization will encourage them to use the method that will promote the health status.

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