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Perception on Malaria Prevalence among Pregnant Women in Ondo State, South Western Nigeria

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Despite concerted efforts to combat malaria, it remains a major health hazard globally, especially, in the tropical regions of the world. This work studied the perception of the prevalence of malaria among pregnant women in Ondo State, Nigeria. A household survey of 785 women in pregnancy from selected areas of Akoko N/W, Akoko S/E, Akure North, Owo, Ilaje, and Okitipupa from different terrains (highland, lowland, and wetland) of the region was conducted using a structured questionnaire. The Human Ecology of Disease and Health Belief Model was adopted. Analyses were done using percentages, ANOVA, homogeneity of variance, and Chi-square at p≥ 0.05. Mosquito effect (41.3%) and dirty environment (24.3%) were identified by pregnant women as the most common causes of malaria across all the terrains. General body weakness and headache (40.4%) are the effects of malaria on pregnant women. About 47% claimed they had an idea of the adverse effects of malaria on pregnant women and their fetuses. More than 77.5% thought that good hygiene can prevent malaria. A high proportion of the respondents (84.4%) agree with the use of bed nets by pregnant women as a preventive measure. Although variations occur in the perception of malaria prevalence among pregnant women across the three terrains, most respondents in the region are well aware of the widespread of malaria and its causes. Variations in malaria prevalence across the locations as denoted by the number of times treated for malaria (F= 3.808) and treatment number per year (F=45.674) were significant. Homogeneity of variance (.000) shows that malaria prevalence and perception were highly significant in the wetland (.000), a bit lower (.001) in the lowland, and lowest (.044) in the highland. Relief and perception of malaria influenced the susceptibility of women to malaria attacks during pregnancy.

Keywords: Women of child bearing age, malaria infection in pregnancy, Ondo State, Nigeria

Introduction

Malaria is an infectious disease transmitted by the Anopheles mosquito. It is caused by the protozoan parasite of the genus Plasmodium. There are four species of this parasite known to infect man namely, *Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium ovale* and *Plasmodium malariae* (Sato, 2021; Memkin-Smith, 2020). Children under five years and pregnant women are more susceptible to malaria infection (Aguzie, 2018). In sub-endemic areas, malaria occurs in subjects of all ages, often most frequently in adults who are exposed to mosquito bites at work. In contrast, in areas of high transmission, the main burden of malaria, including nearly all malaria deaths, is in young children (Snow, 2005; Carneiro *et al*., 2010). Consequences of severe malaria include coma, and death if untreated (Akanbi *et al*., 2010). Severe falciparum malaria may cause deformities in the genital tract to make conception impossible or if it does occur it may prevent normal implantation and placenta development (Raimi and Kanu, 2010).

Malaria in pregnancy is primarily caused by *Plasmodium falciparum* (Anand *et al.*, 2010; CDC, 2015), which is the most dangerous of the four species of malaria-causing parasites that infect humans (Griffin *et al.*, 2010). Oladehinde (2007) reported that the highest prevalence occurred in primigravids (women pregnant for the first time) as compared to multigravids (women who have been pregnant at other times before).

Oladehinde, in his study further observed that malaria prevalence was significantly lower in pregnant women with tertiary education as compared with the educational status of others. Malaria generates a global burden estimated to exceed 40 million disability-adjusted life years (DFID, 2010; WHO, 2012). Prevention and treatment of malaria are essential components of prenatal care in areas where the parasite is endemic (Burema, 2013) since women face higher risks of contracting malaria and associated complications from first pregnancy (WHO, 2011). Other high-risk populations are children below the age of five (Snow *et al.,* 2005) of which two hundred children in Africa are estimated to die of malaria every hour, each day all year round (WHO, 2013). At least 24 million pregnancies are threatened by malaria each year (Uneke *et al.,* 2007), and it is responsible for 20% of low birth weight (Rijken *et al.*, 2011). About three billion people – mostly in the world's poor regions are permanently at risk of malaria (Burema, 2013).

Increasingly, malaria continues to be an important research agenda mostly with the backing of many international partnerships such as the Multilateral Initiatives on Malaria (MIM), and Roll Back Malaria project, a health sector-wide partnership to combat malaria at global, regional, country and local levels (WHO, 2008). The WHO, the governments of endemic countries, and some private organisations have been involved in some interventions to eradicate malaria. This includes the Bill and Melinda Gates Foundation's anti-malarial drugs and vaccines; insecticide-treated nets (ITNs); prophylactic drug treatment and Indoor Residual Spraying (IRS) (Hopp *et al.,* 2015). The Nigerian government has taken steps towards eradicating malaria, which include improving primary health care facilities, educating health workers on better ways of treating malaria, and providing free malaria drugs, especially, for pregnant women (WHO, 2008). Despite all these efforts, the disease remains prevalent among the susceptible population (WHO, 2007), particularly pregnant women and children of Ondo State. This underscores the need for a more holistic social science approach to dealing with the issue.

Perception has been discovered to greatly influence the prevalence of malaria as stated in the theory of human disease ecology and individual health belief model. Meanwhile, Zendo *et al*. (2020) also studied parent's perceptions of the cause of malaria, and there were misconceptions about the cause of malaria and associated malaria prevention experience among school aged children in the Khutcha district of Ethiopia. He reported that there were misconceptions about the cause of malaria and associated experiences of malaria prevention, and it was concluded from the study that targeting health education is paramount for malaria control in the area of study. Though some studies have been carried out on the perception of the parents on the cause of malaria among school aged children, there is a dearth of information on the women's perception of malaria and its effects among pregnant women. Hence this study looked at the influence of perception on malaria prevalence among pregnant women in Ondo State, Nigeria where malaria is pandemic regarding its root cause (Dada *et al.,* 2016; Akanbi *et al.,* 2005).

Materials and method

Study area

The study was carried out in Ondo State, Nigeria. It is one of the six states that make up the South West geopolitical zone of Nigeria. It lies between latitude 5° 05'and 7° 10' north of the equator and longitude 4° 30' and 6°0' east of the Greenwich Meridian. It has interstate boundaries with Ekiti and Kogi States to the north, Edo State to the East, Delta State to the southeast, Osun State to the northwest, and Ogun State to the southwest. The Gulf of Guinea lies to its south and its capital is Akure (Figure 1).

Ondo State has eighteen LGAs that constitute the study area and these were sub-divided into three regions. The division into three regions was based on the topography of the highland (400-1200m), the lowland (50-300m), and the wet (0-50m) area. The climate of Ondo State is a tropical rainforest type with distinct wet and dry seasons. The annual rainfall varies from 2,000mm in the southern areas to 1,150mm in the northern areas (Infoguidenigeria.com, 2016). In the south, while the mean monthly temperature is 27°C, it is 30°C in the northern part of the State. The mean relative humidity is over 75 percent in the south. Meanwhile, it is less than 70% in the north (Dada *et al.*, 2016).

Ondo State covers an area of 15,195.2 square kilometres and has a population of 3,460,877 (2006 census figures) and a population density of 218 people per square kilometer. It accounts for 2.5% of Nigeria's total population (Infoguidenigeria.com, 2016). The location with the highest population is the wetland area followed by the lowland and lastly the highland areas. However, all these climatic factors predispose Ondo State to the malaria disease vector (mosquitoes) typical of the tropical region.

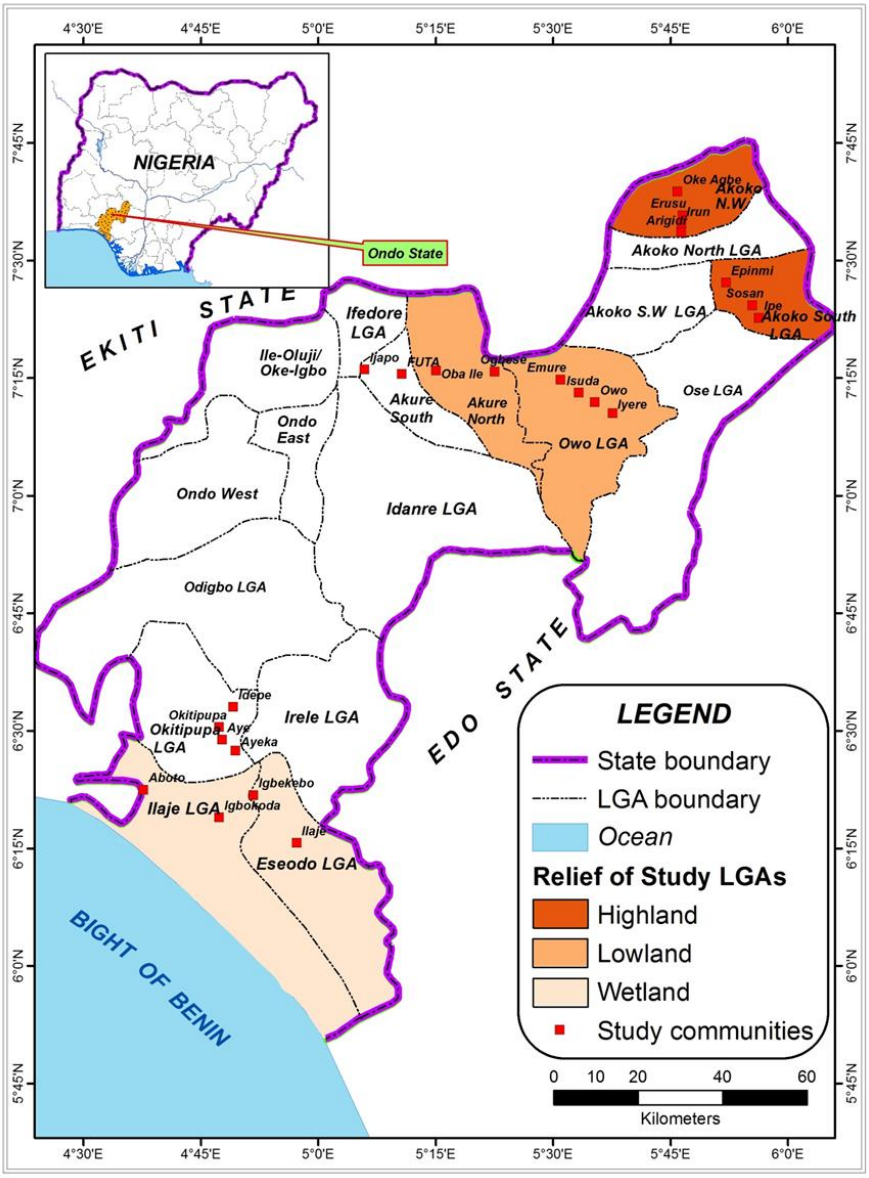


Fig.1: Map of Ondo State showing study area

Human disease ecology

Human ecology of disease is concerned with human behaviour in its cultural and socio-economic context as man interacts with environmental conditions to prevent disease among susceptible populations (Meade *et al*., 2012). Human ecology is an interdisciplinary and trans-disciplinary study of the relationship between humans and their natural, social, and built environments. Emphasis here is placed on man-environmental interactions rather than on the effects of these interactions (Afolayan, 2006).

Three major components are the core concern of Human Disease Ecology i.e., Habitat (environment), population, and behaviour (culture). Each of these aspects of habitat, population, and culture have characteristics of relevance to the study of the interrelationships as shown in Figure 2.1.

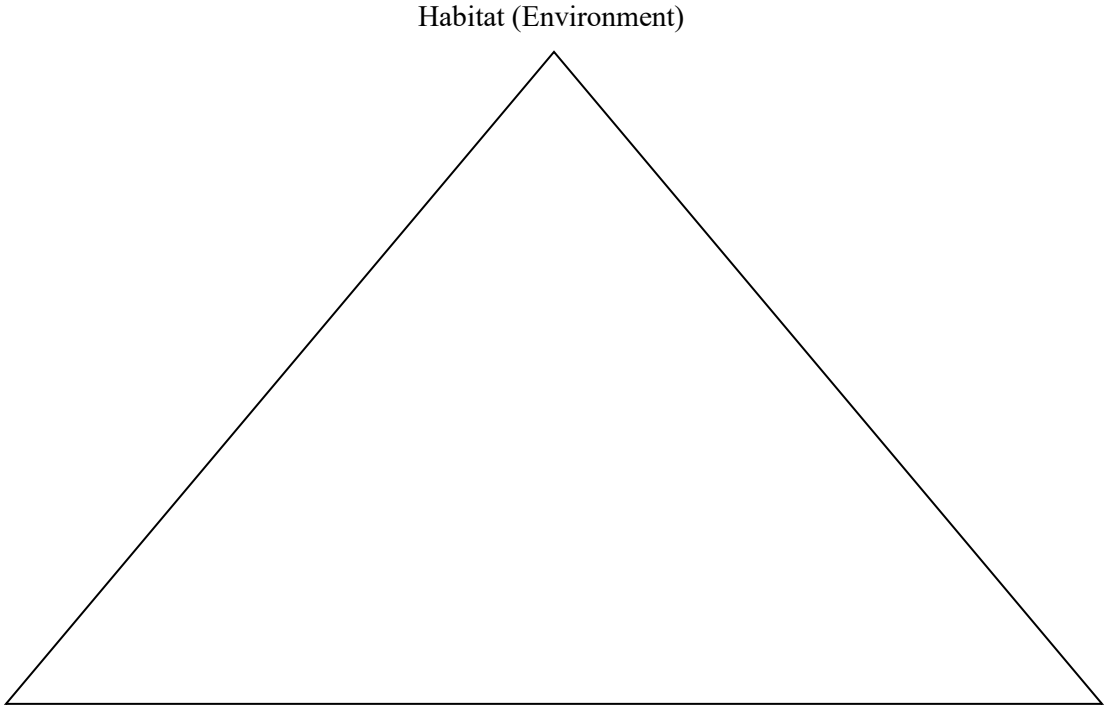


Figure 2.1: Human disease ecology concept (Meade *et al.,* 2000)

Habitat (environment) refers to the natural environment where people live (Meade *et al*., 2010), and it encompasses both the physical and living components of the environment. The specific characteristics of the habitat, such as highland, lowland, and wetland areas, can greatly influence the breeding of mosquitoes that carry malaria, and therefore affect the prevalence of the disease. The chosen research environment for this study aligns well with this situation.

Population refers to the demographic characteristics (i.e. age structure, sex, education/literacy, marital status, race, ethnicity, religion) which affect the health status of a society. This has a significant effect on malaria prevalence, as children aged 0-5 are highly vulnerable. Young women, particularly those who are pregnant for the first time, are also at a higher risk of contracting malaria. Additionally, levels of literacy, race, and ethnicity can affect how different populations perceive malaria. Some religious beliefs also do not permit male doctors to treat pregnant women and may discourage them from seeking care at antenatal and regular clinics, especially when they have malaria.

Behaviour refers to human activities that can affect disease ecology. These activities originate from culture, economic constraints, social norms, and individual psychology, as well as movement from one place to another. For example, behaviour can modify the environment such that mosquitoes are easily bred, resulting to malaria prevalence. This model is highly relevant to this research, as factors such as habitat/physical environment (i.e. terrain/varying heights), population, and behaviour significantly influence malaria prevalence. These relief features were the core factors considered in this study where the habitat of man influences the presence or absence of disease in the population.

The Health Belief Model

The Health Belief Model (HBM) is a psychological model developed by Rosenstock (1950). The model was developed to explain and

predict health behaviour by focusing on individuals' beliefs, attitudes, and perceptions about diseases. Human beliefs about a disease affect perception, which equally influences one's attitude and behaviour towards making decisions and taking actions against contracting and treating the disease. An individual's action is based on stimulus. Hence perception and belief of an individual affects the way such a person will react to a particular disease that the person is susceptible to.

The key variables of the health belief model are first the degree of perceived disease risks that is perceived susceptibility to contracting a health condition. Also, the perceived severity of the disease once contracted, and thirdly perceived barrier to diet adherence. These include the potential negative consequences that may occur due to taking particular health actions. For example, weight loss/gain, psychological (lack of spontaneity in food selection), and financial demands (i.e. cost of new food). The perceived benefit of diet adherence is the believed effectiveness of dietary strategies designed to reduce disease threats. The fourth one is cued to action and entails the events that motivate people to change dietary habits which are crucial determinants of change. The last one is self-efficacy which involves being able to successfully execute the dietary behaviour required to produce desired outcomes (Linda, 2001).

The concept is graphically presented in Figure 2.

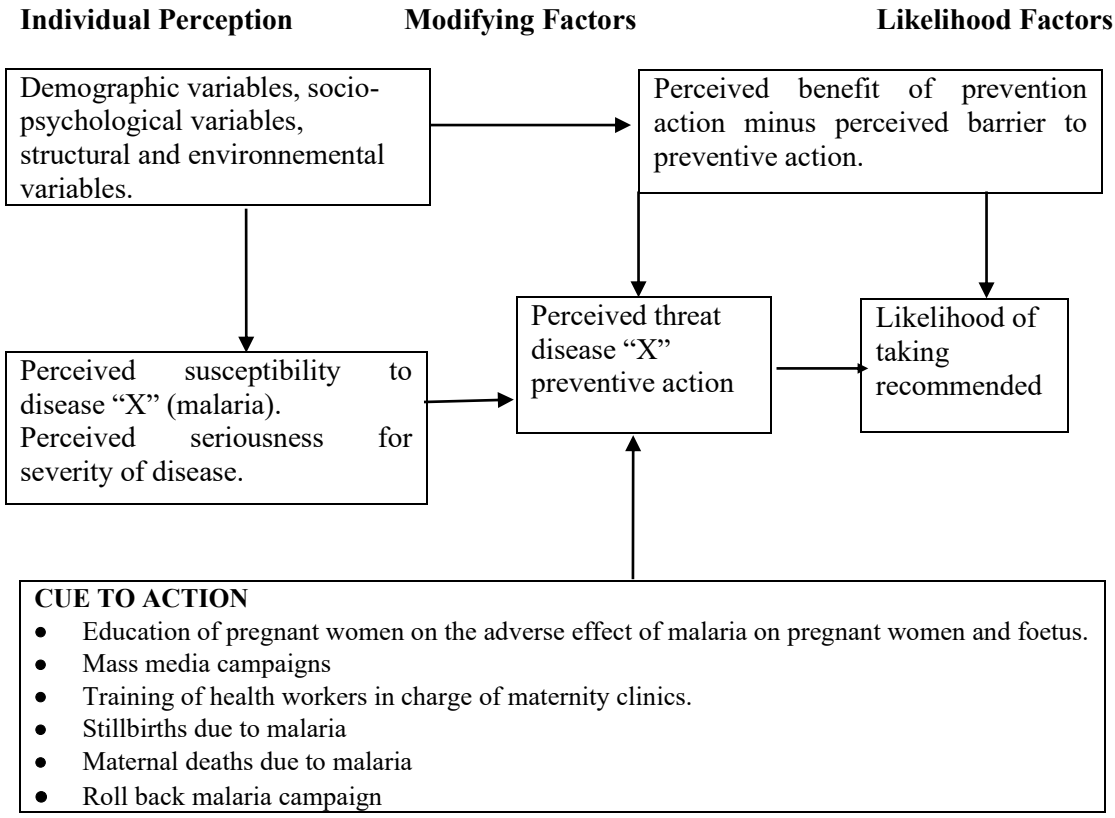


Fig 2: The Health Belief Model
Source: Rosen Stock (1950)

Methodology

Types and sources of data

The study utilised both primary and secondary data. The primary data was collected from a field survey which was divided into two phases. In the first phase, a reconnaissance was carried out to test the research questionnaire and prepare logistics for the main survey. The second phase involved the main field survey of administering questionnaires and conducting in-depth interviews with pregnant

women, as well as and observing the cleanliness of the surrounding environment of the research population. The questionnaire gathered information about pregnant women's perceptions of malaria and its prevalence in the study area. Secondary data was obtained from the Ministry of Health, Ondo State, regarding the prevalence of malaria among pregnant women over the past five years. Perception characteristics of respondents included in the questionnaire are: what makes pregnant women have malaria, how does malaria affect pregnant women, idea on the adverse effects of malaria on pregnant women and the foetus, effects of malaria on the mother and child, how can pregnant women prevent malaria during pregnancy and opinion on use of bed nets to prevent mosquitoes.

Sample frame and sample size

The target population for this study consisted of pregnant women from six different local government areas in the highland, lowland, and wetland regions in Ondo State. Two local government areas were selected from each topography. From the highland, Akoko Northwest and Akoko Southeast LGAs were selected; from the lowland, Owo and Akure North LGAs were selected; and from the wetland areas, Okitipupa and Ilaje LGAs were selected. The headquarters of each selected LGA were chosen as research points and this was based on the elevation and population of each LGAs. Respondents are women who had been pregnant at least once before participating in the questionnaire.

The sample size was determined using the reference table by Krejcie and Morgan (1970) to determine sample size for research. The population for each local government area was evenly distributed among the localities for a viable survey and accurate results. Based on estimations, 785 women were sampled in the survey with a 95% level of confidence and 5% margin of error, as approved in the Social Sciences. The number of questionnaire copies administered was determined according to the breakdown. Out of the 785 questionnaires administered, 197 were administered in the highland area, 236 in the lowland, and 352 in the wetland area. These calculations were based on the population of each local government areas understudy, as shown in Table 1.

Table 1: Distribution of sample

Relief	LGA	Population 2006	Population (Projected 2017)	Sample	Co-ordinates
Highland (300-2000m above sea level)	Akoko N/W	104,791	141,987	142	7.6^0N, 5.9^0E
	Akoko S/E	40,268	54,561	55	7.4^0N, $5,7^0$E
Lowland (50-300m above sea level)	Owo	110260	149,324	149	7.2^0N, 5.6^0E
	Akure North	64239	87,041	87	7.2^0N, 5.2^0S
Wetland (0-50m above sea level)	Ilaje	142979	193,730	194	6.3^0N, 4.8^0E
	Okitipupa	116544	157,912	158	6.5^0N, 4.7^0E
Total		**568034**	**784555**	**785**	

Source: Field survey, 2018

Sampling technique and data collection procedure

A survey was conducted to assess the prevalence of malaria infection among pregnant women in the highland, lowland, and wetland areas of Ondo state. These areas were selected as the focus of the research. The survey involved administering questionnaires to pregnant women within the research community. Data analysis included the use of techniques such as Homogeneity of Variance and Chi-Square analysis to validate information on malaria and to provide suggestions for addressing the issue.

Data analysis

Descriptive and inferential statistics were used for the analysis. The data collected were converted into tables for measurement. Percentages,

frequency tables, and charts were used to illustrate malaria prevalence. The statistical tools used include ANOVA, homogeneity of variance, and Chi-square to examine two categorical variables that are independent in influencing the test statistic.

Variable-Y = a + bi xi + b_2x_2 + b_3 x_3.... +b_nx_n
Y = dependent variable
a = constant or intercept
y = Malaria prevalence
x_1 = what makes pregnant women have malaria
x_2 = how does malaria affect pregnant women
x_3 = do you have any idea on the adverse effects of malaria on pregnant women and the foetus?
X_4= what are the effects on the mother and child
X_5 = how can women prevent malaria be during pregnancy?
X_6 =what is your opinion about the use of bed nets

Results and discussion

Perception of pregnant women on malaria cause and its influence on prevalence

Table 1 shows the opinion of pregnant women on what makes pregnant women have malaria. Reports from respondents revealed that mosquito was rated 364(46.4%) as a causal factor for malaria among pregnant women, and the malaria prevalence among those who have the perception that mosquito is the cause of malaria infection was 274(34.9%). This connotes that most of the women were aware that mosquito was the disease vector that transmits malaria in the research area but this awareness had little impact on malaria prevalence among the pregnant women understudied as this group of respondents still had the highest record of prevalence. This confirms literature on the human disease ecology which states that man's natural habitat affects his/her health and awareness had less impact on prevalence according to the study. Respondents who signified dirty environment followed with 231(29.4%) and malaria prevalence recorded here was 141(26.6%). The human disease ecology on man's habitat affecting the prevalence of the disease is also applied directly here. Some respondents opined that stress 75(9.5%) is the actual cause of malaria while 44(8.4%) of these had malaria overall. Respondents with the opinion that pregnancy was the cause were 65(8.3%) and the prevalence of malaria recorded was 35(6.7%), whereas respondents with the opinion that hygiene was a causal factor were 22(2.8%) and the malaria prevalence in this group was 10(4.2%).

However, 75(9.5%) pregnant women were of the opinion that stress was the cause, while malaria prevalence in this group was 44(8.4%). Respondents with the perception that not attending the antenatal clinic for routine check-ups is the cause were 2(.3%) and malaria prevalence recorded in this group was 1(.2%). Meanwhile, respondents with the opinion that ignorance was the cause were 26(3.3%), and malaria prevalence recorded here was 21(4%). However, all these characteristics have significant effects on malaria prevalence according to the research as the chi-square results showed; chi-square value = 105.240[a], df=63, sg= .001 and ANOVA (F= 4.893, sf=.000). Hence, opinion on the cause of malaria among pregnant women significantly influenced malaria prevalence according to the research which confirms literature on the influence of habitat on prevalence. This shows that proper orientation must be given to pregnant women on factors that cause malaria which they must avoid during pregnancy to avert being victims.

Table 1: Perception on causes of malaria infection in pregnancy

Opinion on what makes pregnant women have malaria	Frequency (f)	Prevalence. (%)
Dirty environment	231(29.4%)	140(26.6%)
Pregnancy	65(8.3%)	35(6.7%)
Mosquito	364(46.4)	274(34.9%)
Hygiene	22(2.8%)	10(4.2%)
Stress	75(9.5%)	44(8.4%)
Not going to Hospital/Antenatal	2(.3%)	1(.2%)
Ignorance	26(3.3%)	21(4%)
Total	785(100%)	525(100%)

Source: Fieldwork, 2018

Table 2 reveals individual opinions on the effect of malaria on pregnant women with the question 'How does malaria infection affect pregnant women'. Out of the 785 respondents, 377(48.0%) believed that it leads to weakness and headache, which was rated highest among the responses in the study. Among this group, the malaria prevalence was 235(44.8%), which showed that most women believed that once a woman experiences weakness and headache in pregnancy; it is automatically malaria. This is followed by 252(32.1%) respondents who signified that it was through mosquito bite, and malaria prevalence recorded among this group was 198(37.7%), while 26(3.3%) respondents perceived that vomiting is an effect of malaria infection, and the malaria prevalence recorded in this group was 6(1.1%). Furthermore, 64(8.2%) respondents opined that dizziness/loss of appetite is an effect of malaria among pregnant women and the malaria prevalence recorded in this group was 41(7.8%). Respondents who believed that 'not visiting the hospital' is an effect of malaria was 5(.6%) and the malaria prevalence recorded in the group was 3(0.6%); this group had the least frequency and prevalence according to the study. This shows that most women in the study area recognised the importance of health clinics and make use of it. Respondents who opined that it affects baby/mother were 14(1.8%) and malaria prevalence recorded was 8(1.5%), while respondents who signified restlessness were 24(3.1%) and the malaria prevalence recorded among this group was 15(2.9%). Pregnant women with the perception that loss of weight is an effect is 11(1.4%) and malaria prevalence recorded in this respect is 11(2.1%), while the opinion that death is a resultant effect was 12(1.5%) and the malaria prevalence recorded was 8(1.5%). The chi-square results were; chi-square value 193.086[a], df=81 and sf= .000 and ANOVA (F= 3.059, sf=.001). These showed that the opinion of pregnant women on the effects of malaria during pregnancy significantly influenced malaria prevalence in the study area according to the research. Caregivers should pay keen attention to this factor by explaining the major effects of malaria during antenatal to avoid future assaults on pregnant women.

Table 2: Perception of the effects of malaria infection on pregnant women

Opinion on how malaria infection affects pregnant women	Frequency (%)	Prev. (%)
Weakness and Headache	377(48.0%)	235(44.8%)
Through Mosquito bite	252(32.1%)	198(37.7%)
Vomiting	26(3.3%)	6(1.1%)
Dizziness/Loss of Appetite	64(8.2%)	41(7.8%)
Not Visiting the Hospital	5(.6%)	3(0.6%)
Affects Baby/Mother	14(1.8%)	8(1.5%)
Restlessness	24(3.1%)	15(2.9%)
Loss of Weight	11(1.4%)	11(2.1%)
Death	12(1.5%)	8(1.5%)
Total	785(100%)	525(100%)

Source: Fieldwork, 2018

In Table 3, the majority of participants responded that they have an idea about the adverse effects of malaria on pregnant women and the fetus. Specifically, 422(53.8%) of the participants indicated that they have an idea, and among them, the prevalence of malaria was 223(42.5%). On the other hand, 363(46.2%) of the participants reported that they have no idea, and the malaria prevalence among them was 265(50.5%). The chi-square value was calculated as 49.987[a] df= 18. sf=.000 and ANOVA (F= 3.400, sf=.000). The characteristic has a strong influence on malaria prevalence according to the study. The results showed that not having an idea of the adverse effects of malaria on the pregnant woman and the baby in the womb strongly affects malaria prevalence in the area of study and that women need appropriate orientation on what malaria can do when the mother contacts it during pregnancy. This is quite relevant to the health belief model,

which states that the perception and belief of an individual affects the way such person will react to a particular disease that he/she is susceptible to. The study shows that a correct perception of the adverse effects of malaria on pregnant women and the foetus can significantly impact malaria prevalence.

Table 3: Perception on the adverse effects of malaria on pregnant women and the foetus

Idea on the adverse effects of malaria on pregnant women and the foetus	Frequency (%)	Prevalence
Have idea	422(53.8%)	223(42.5%)
Have no idea	363(46.2%)	265(50.5%)
Total	785(100%)	525(100%)

Source: Fieldwork, 2018

The results as shown in Table 4 illustrate the impact of malaria on mothers and children. Out of 785 survey respondents, 132(16.8%) believed that malaria leads to jaundice, with a malaria prevalence of 80(15.2%) in this group. Additionally, 653(83.2%) respondents believed that malaria could cause miscarriages, and the malaria prevalence recorded in this group was 445(84.8%). The results showed that a large number of respondents are knowledgeable to some extent about the resultant effects of malaria during pregnancy. According to the study, this perception has a significant influence on malaria prevalence, as shown by a chi-square value of 42.022[a], df=18, sg=.001 and ANOVA (F= 3.588, sf=.000). This supports the health belief model that the degree of the perceived risk of a disease affects the perceived susceptibility to contracting a health condition and the perceived severity of the disease once contracted.

Table 4: Perception of what effects respondents think malaria has on both mother and child

Effects malaria has on both mother and child	Frequency (%)	Prevalence
Jaundice	132(16.8%)	80(15.2%)
Miscarriage	653(83.2%)	445(84.8%)
Total	785(100%)	525(100%)

Source: Fieldwork, 2018

In Table 5, the question "In your opinion, how can pregnant women prevent malaria during pregnancy?" was presented. The findings revealed that 116(14.8%) respondents believed that a clean environment can prevent malaria, with a malaria prevalence of 60(11.4%). Additionally, 669(85.2%) respondents believed that "Good Hygiene" (Food, water) can prevent malaria, with a malaria prevalence of 465(88.6%). The study shows that most women believe that good hygiene can prevent malaria during pregnancy. However, the statistical analysis showed that the factor of knowledge about malaria prevention does not significantly affect malaria prevalence, as indicated by the chi-square value of 24.228[a], df=18, sf =.148, and ANOVA (F=1.979, sf =.039). Furthermore, the health belief model also supports that this factor does not significantly influence the occurrence of the disease.

Table 5: Perception on your own opinion on how pregnant women can prevent malaria during pregnancy

Opinion on how pregnant women can prevent malaria during pregnancy	Frequency	Percentage (%)	Prevalence
Clean Environment	116	14.8	60(11.4%)
Good Hygiene (Food, water)	669	85.2	465(88.6%)

Source: Fieldwork, 2018

In Table 6, the question "What is your opinion about using bed nets?" was asked from 785 respondents. Out of these, 557(71.0%) believe that using bed nets is effective in preventing mosquitoes, and the malaria prevalence in this group was 375(71.4%). In contrast, 228(29.0%) are of the opinion that the use of mosquito nets prevent malaria. The malaria prevalence in this group was 150(28.6%) and the chi-square tests were (chi-square value=47.596[a], fd= 18, sg= .000), indicating that this factor significantly affects malaria prevalence. The study confirms the health belief model, suggesting that cues to action play a crucial role in motivating people to change their habits, including dietary habits, to prevent specific diseases.

Table 6: Perception of respondents on the use of bed nets

Opinion on the use of bed nets	Frequency	Percentage (%)	Prevalence
It's okay (Prevents mosquito)	557	71.0%	375(71.4%)
Prevents Malaria	228	29.0%	150(28.6%)
Total	**785**	**100%**	**525(100%)**

Source: Fieldwork, 2018

Table 7 presents the results of homogeneity of variance tests (.011, .000, .000), indicating a significant correlation between malaria prevalence and perception in the high, low, and wet regions of the study.

Table 7: Test of homogeneity of variances among the relief regions

	Levene statistic			df1			df2			Sig.		
	High	Low	Wet	High	Low	Wet	High	Low	Wet	High	Low	wet
Perception Malaria	2.842[c]	7.185[c]	6.906[c]	13	9	11	182	221	336	.011	.000	.000

Source: Author's analysis, 2018

Conclusion

The study found that the opinions of pregnant women strongly influenced the prevalence of malaria. All tested factors except the question "In your own opinion, how can pregnant women prevent malaria during pregnancy?" significantly influenced the prevalence of malaria. The chi-square test for this question was not significant. The ANOVA tests showed a significant relationship between the perception of pregnant women on malaria and the prevalence of malaria. The study also found that human perception of the severity of a disease has a significant influence on the efforts to eradicate it by all means. These calls for quick attention of healthcare givers, as pregnant women are focal points to the numerical growth of the population. This will go a long way to reduce malaria prevalence in endemic regions of the world if adequate attention is proffered.

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