Original Article

Knowledge, Perception and Prevention of Malaria in Pregnancy Among Pregnant Women Attending Selected Antenatal Clinics in Abeokuta, Ogun State Nigeria

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Abstract

Malaria in pregnancy is a significant global health concern, particularly in tropical regions, malaria during pregnancy (MiP) is a major cause of morbidity and mortality. It results in low birth weight (LBW), premature delivery, maternal anemia, and intrauterine growth retardation. This study aimed to assess the knowledge, perception, and preventive practices regarding malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State. A descriptive cross-sectional study was conducted with 189 participants, using a researcher-administered questionnaire. Data were analyzed with SPSS version 22.0, employing descriptive statistics to describe sociodemographic characteristics, knowledge, perception, preventive practices, and perceived barriers to implementing malaria prevention measures.

The findings revealed that 85.7% of the participants had a high level of knowledge about malaria in pregnancy, and 78.3% believed that malaria could lead to maternal death. Financial constraints were identified by 76.7% of participants as a significant barrier to implementing preventive measures. The study found no significant association between the level of knowledge and factors such as age (p=0.391), education level (p=0.113), number of previous pregnancies (p=0.199), trimester (p=0.608), and antenatal clinic attendance (p=0.878). However, occupation (p=0.031) was significantly associated with the level of knowledge.

Based on these findings, the study recommended providing insecticide-treated nets, mosquito repellents, and antimalarial medications at reduced or no cost to address financial barriers and enhance malaria prevention among pregnant women.

Keywords: Antenatal clients, Long-lasting insecticidal nets(LLINs), Malaria in Pregnancy, sulfadoxine-pyrimethamine (SP)

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Background

One of the most deadly infectious diseases, malaria claimed the lives of around 229 million people worldwide in 2019[1]. Sub-Saharan Africa accounts for 80% of the global illness burden in ninety countries, which presents a serious health issue[2]. Malaria has a high rate of morbidity and mortality, especially in pregnant women, and has long been recognized as a serious global health concern[3]. It is one of the most common and serious tropical diseases in the world, and it may be prevented and treated. It is spread by the bites of female Anopheles mosquitoes carrying the infection[4]. Because of the numerous risks that malaria poses to both the pregnant woman and her unborn child, pregnant women are more susceptible to contracting the disease.

In tropical regions, malaria during pregnancy (MiP) is a major cause of morbidity and mortality. It can result in low birth weight (LBW), premature delivery, maternal anemia, and intrauterine growth retardation. Of the 45 endemic nations in Africa, Nigeria alone accounts for 25% of all occurrences of malaria, with almost 150 million people living in high malaria transmission zones[5].

[6]Intermittent preventive treatment during pregnancy (IPTp) has been demonstrated to decrease instances of maternal malaria, maternal and fetal anemia, placental parasitemia, low birth weight (LBW), and neonatal mortality[6]

Pregnancy-related malaria symptoms and consequences differ based on the degree of malaria transmission in a given area and the individual's acquired immunity[7]. In African regions where malaria is endemic, an estimated 25 to 30 million women fall pregnant annually. Low birth weight (LBW) and malaria-associated maternal illness are particularly common in regions where Plasmodium falciparum infections are prevalent.Africa[4].

In Nigeria, malaria in pregnancy (MiP) is a serious public health concern since a considerable number of pregnant women who are asymptomatic harbor malaria parasites, which can cause anemia. When comparing pregnant women with malaria to non-pregnant adults with severe malaria, the former have twice as high rates of maternal mortality. The most typical sign of MiP is anemia, which usually appears in the second trimester. Furthermore, malaria impairs children's growth and development and increases their vulnerability to other illnesses. Pregnant women continue to use insecticide-treated bed nets (LLINs) at a low rate; only 30% of pregnant women in households with LLINs reported having slept under one the night before the survey, despite evidence showing the effectiveness of LLINs in reducing malaria-related mortality and morbidity (NDHS, 2013)[8].

Malaria control efforts are significantly impacted by persistent misconceptions about malaria risk factors and transmission, according to research on malaria knowledge, attitudes, and practices (KAP)[9]. Furthermore, research carried out in Northern Nigerian rural regions has demonstrated a notable disparity between the actual application of malaria prevention strategies and their understanding[10].

Nigeria still has a ways to go before meeting the goals established for IPT-SP, despite the implementation of numerous policies and programs by the government, financial agencies, and development partners to lessen the impact of MiP[1112] This study is to assess pregnant women attending the antenatal clinics of the Federal Medical Centre, Abeokuta, Ogun State, about their knowledge, views, and preventative measures related to malaria, given their increased vulnerability to the disease. There hasn't been much research on mothers' understanding about malaria prevention in hospital settings, so this study aims to close this knowledge gap and provide new perspectives on current knowledge gaps.

Statement of Problem

In many regions of Africa, particularly Nigeria, where it poses a serious risk to expectant mothers and their unborn children, malaria still poses a major public health concern[8]. Roughly 11% of mothers die each year from malaria during pregnancy, according to the national malaria elimination program (NMEP) in 2020. Maternal anemia, low

birth weight, preterm birth, and maternal death are among the serious consequences that pregnant women in Nigeria are more likely to experience due to malaria, which is the country's leading cause of morbidity and mortality among mothers and newborns.

For expectant mothers looking for prenatal treatment and assistance, the antenatal clinics are an essential first point of contact. Comprehending the variables impacting pregnant women's knowledge, attitudes, and preventive measures about malaria is essential for creating focused interventions to improve the health of mothers and fetuses.

Thus, the primary concern this study aims to address is the inadequate awareness, flawed perception, and inefficient malaria preventive strategies among expectant mothers who visit certain antenatal clinics in Abeokuta, Ogun State. The purpose of this study is to investigate the variables that contribute to this issue, such as sociodemographic traits, behavior related to seeking health care, availability of healthcare facilities, and knowledge of malaria prevention techniques. The researcher hopes to improve pregnant women's and their babies' outcomes related to malaria by finding gaps in knowledge, perception, and preventative practices. These gaps will then be used to influence the creation and implementation of evidence-based treatments.

Study Objectives

The aim of this study, is to assess the knowledge, perception, and preventive practices for Malaria in Pregnancy among pregnant women attending antenatal unit of Federal Medical Centre, Abeokuta, Ogun State.

Specific Objectives

To;

1. Assess the knowledge of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State.
2. Examine the perception of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State.
3. Assess the Preventive practices of Malaria in pregnancy among pregnant women selected antenatal clinics in Abeokuta, Ogun State.
4. Assess the perceived barriers and facilitators to implementing preventive measures for malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State.

Research Questions

1. What is the level of knowledge of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State?
2. What is the perception of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State?
3. Are there Preventive practices of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State?
4. What are the perceived barriers to implementing preventive measures for malaria among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State?

Hypothesis

(1) There is no significant relationship between level of education and knowledge of Malaria in pregnancy.

(2) There is no significant association between number of pregnancies and preventive practices of malaria in pregnancy.

Scope of Study

This study was on women attending selected health centers in Abeokuta namely Federal medical centre Abeokuta, Oba Ademola Maternity Hospital and Okeilewo health center.

Methodology

Study Population

The population of the study consisted of female clients who are currently pregnant, between the ages of 18 and 40 years and are currently attending the antenatal clinics list above.

Sampling and Sampling Technique

This study utilized a multi stage sampling technique will be used to select participants.

A total of 189 antenatal clients were sampled from the population using Yamane formula (Yamane, 1973) and allowed to fill the questionnaire.

Inclusion Criteria

- Female clients attending antenatal clinic of Federal Medical Centre Abeokuta.
- Female clients between the age of 18 and 40 years who are pregnant
- Female clients who give their consent to participate in this study

Exclusion Criteria

- Female Clients who are not pregnant or have not been pregnant before
- Female clients less than 18 years or older than 40 years
- Female clients who do not give their consent to participate in this study

Data Collection Tools

- Data was collected using a researcher administered questionnaire. The questionnaire

Reliability

The questionnaire was pre-tested among 19 pregnant women attending the antenatal clinic of Ikota health centre, Lagos Stateto evaluate the validity of the questions before actual data collection. Reliability of the test was done using Cronbach's α. and a value of 0.756 was gotten

Method of Data Collection

The antenatal clinics selected for the study served as the recruitment sites for eligible participants. Individuals who met the inclusion criteria were identified and introduced to the study. The purpose and benefits of the research were clearly explained to all prospective participants, and they were assured that the study posed no anticipated risks or exposures. This assurance facilitated the process of obtaining informed consent from each participant.

Each eligible participant was taken through the study procedures again to ensure clarity and understanding. Once informed consent was obtained, the researcher proceeded to administer a structured questionnaire designed to collect quantitative data. Participants received assistance in completing the questionnaire to ensure accuracy and completeness of responses.

The completed questionnaires were reviewed to ensure consistency and validity of the data collected. The questionnaire was structured into five sections, covering participants' demographic characteristics, knowledge, perception, and practices related to malaria prevention during pregnancy. A total of 189 participants were targeted for the study. Confidentiality of all responses and personal information was strictly maintained throughout the data collection process.

Method of Data Analysis

Both descriptive and inferential statistics were applied during the data analysis process. Inferential statistics were used to test the study hypotheses, while descriptive statistics were employed to summarize the data. Quantitative data analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 26.0, with stratified analysis performed as needed.

Descriptive statistics swas used to present data on participants' sociodemographic characteristics, knowledge and perception of malaria in pregnancy, preventive practices, and perceived barriers to implementing malaria prevention measures.

A Likert scale scoring system was employed to assess the level of awareness regarding malaria during pregnancy.

Responses on the Likert scale were categorized and scored to quantify participants' knowledge levels. Based on the scoring system, a knowledge level above 70% was classified as high, scores between 60% and 69% were considered moderate, and scores below 60% were deemed low.

For inferential analysis, the Chi-square test was used to determine associations between selected variables and the level of knowledge regarding malaria in pregnancy. The results were presented using tables and bar charts, accompanied by appropriate narrative descriptions.

Study Results

Socio-demographic Characteristics

The socio-demographic factors of the participants are summarized in Table 4.1 below. Most of the participants 123 (65.1%) were between the age of 30-34 years of age. 166(87.9%) of the participant had tertiary education. Almost three quarter of the participants 119(63%) were employed. One third of the participants 69(36.5%) have had three previous pregnancies.133 (70.4%) of the participants were in their second trimester.

Sociodemographic characteristics of the participants

	Frequency	Percentage
Age		
18-23 years	14	7.4
24-29 years	15	7.8
30-34 years	123	65.1
35-40 years	37	19.6
Total	189	100
What is your Educational Level		
Primary Education	9	4/8
Secondary Education	14	7.4
Tertiary Education	166	87.8
Total	189	100
what is your Occupation		
Unemployed	23	12.2
Employed	119	63.0
Self employed	47	24.9
Total	189	100

Continue....

Number of previous Pregnancies		
1	38	20.1
2	47	24.9
3	69	36.5
4	24	12.7
5	22	5.8
Total	189	100
Trimester		
First	33	17.5
Second	133	70.4
Third	23	12.2
Total	189	100
Antenatal Clinic		
FMCA	63	33.3
OAMH	63	33.3
Oke-ilewo	63	33.3
Total	189	100

Level of knowledge of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State?

The knowledge of Malaria in pregnancy among women attending selected antenatal clinics in Abeokuta, is summarized in table 4.2 below. Majority of the participants 166(87.8%) agreed that Malaria can be more severe in pregnant women compared to non-pregnant women. About three quarter of the participants 133(70.4%) agreed that it is safe to take antimalarial medication during pregnancy for preventing or treating malaria. All ofthe participants 185(97.9%) agreed that Sleeping under an insecticide-treated bed net (ITN) can reduce the risk of malaria infection during pregnancy. 127(67.2%) agreed that Malaria symptoms during pregnancy are similar to those in non-pregnant individuals. 172(91.0%) agreed that Malaria in pregnancy can lead to complications such as low birth weight, preterm birth and death. All of the participants 189(100%) agreed that Pregnant women should seek prompt medical care if they experience symptoms suggestive of malaria. 91(48.1%) disagreed that Pregnant women should avoid travel to malaria-endemic areas to prevent malaria infection. 166(87.8%) agreed that Malaria is caused by infected female Mosquito bite. 162(85.7%) of the participants had high level of knowledge on Malaria in pregnancy.

The knowledge of Malaria in pregnancy among pregnant women attending the selected antenatal clinic

ITEMS	Frequency(N)	Percentage (%)
Malaria can be more severe in pregnant women		
Agree	166	87.8
Neutral	9	4.8
Disagree	14	7.4
Total	189	100
It is safe to take antimalaria medication during pregnancy for preventing malaria		
Agree	133	70.4
Neutral	19	10.1
Disagree	37	19.6
Total	189	100
Sleeping under an insecticide treated bed net ITN (can reduce the risk of malaria infection during pregnancy		
Agree	185	97.9
Neutral	4	2.1
Disagree	0	0
Total	189	100
Malaria symptoms during pregnancy are similar toto those in non-pregnant women		
Agree	127	67.2
Neutral	10	5.3
Disagree	52	27.5
Total	189	100
Malaria in pregnancy can lead to complications such as low birth weight, preterm birth and death		
Agree	172	91
Neutral	15	7.9
Disagree	2	1.1
Total	189	100
Pregnant women should seek prompt medical care if they have symptoms suggestive of malaria		
Agree	189	100
Neutral	0	0
Disagree	0	0
Total	189	100

Continue....

Pregnant women should avoid travelling to malaria endemic areas with malaria infection areas		
Agree	86	48.1
Neutral	12	6.3
Disagree	91	45.5
Total	189	100
Malaria is caused by an infected female mosquito bite		
Agree	166	87.8
Neutral	13	6.9
Disagree	10	5.3
Total	189	100
level of knowledge on Malaria in pregnancy		
High	162	85.7
Low	27	14.3
Total	189	100

The perception of MIP among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State

The Perception of Malaria in Pregnancy among the pregnant women attending attending selected antenatal clinics in Abeokuta, is summarized in the table 4.3 below. Almost all of the participants 185(97.9%) agreed to the perception that malaria in pregnancy is a serious health risk in pregnant women. Majority 182(96.3%) of the participants strongly agreed that Malaria in pregnancy is a serious health risk to the unborn child. More than three quarter 148(78.3%) of the participants agreed that Malaria in pregnancy can lead to death of the mother. More than three quarter159(84.1%) of the participants agreed that Malaria in pregnancy can lead to death of the foetus. About half 99(52.4%) of the participants agreed malaria is a leading cause of death among pregnant women. Almost all of the participants 183(96.8%) of the participants agreed that Malaria in pregnancy is a preventable disease. Majority of the participants 177(93.7%) agreed that agreed that Use of insecticide-treated bed nets is not harmful to the pregnant woman.

: the perception of Malaria in pregnancy among pregnant women attending selected antenatal clinics

perception of Malaria in pregnancy among pregnant women attending selected antenatal clinics	**Frequency(N)**	**Percentage(%)**
MIP is a serious health risk in pregnant women		
Agree	185	97.9
Neutral	4	2.1
Disagree	0	0
Total	189	100
MIP is a serious health risk to the unborn child		

Continue....

Agree	182	96.3
Neutral	5	2.6
Disagree	2	1.1
Total	189	100
MIP can lead to death of the mother		
Agree	148	78.3
Neutral	15	7.9
Disagree	26	13.8
Total	189	100
MIP can lead to death of the fetus		
Agree	159	84.1
Neutral	13	6.9
Disagree	17	9.0
Total	189	100
MIP is a leading cause of death among pregnant women		
Agree	99	52.4
Neutral	49	25.9
Disagree	4.1	21.7
Total	189	100
MIP is a preventable disease		
Agree	183	96.8
Neutral	2	1.1
Disagree	4	2.1
Total	189	100
Use of ITN is not harmful to the pregnant woman.		
Agree	177	93.7
Neutral	6	3.2
Disagree	6	3.2
Total	189	100

The Preventive practices of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta

is summarized in the table 4.4 below. More than one third of the participants, 77(40.7%) always sleep under an insecticide-treated bed net (ITN) every night. Almost two third 121(64%) of the participants always take antimalarial medication as prescribed by a health care provider for preventing malaria during your pregnancy. All 181(95.8%) of the participants

claimed to always seek prompt medical care when experiencing symptoms suggestive of malaria during your pregnancy. More than half 113(59.8%) of the participants always avoid travelling to malaria-endemic areas during your pregnancy. Almost all of the participants 184(97.4%) of the participants always ensured that their surrounding environment is clean to prevent mosquito breeding. More than three quarter of the participants 142(75.1%) always use mosquito repellents or sprays to prevent mosquito bites during your pregnancy. Less than two third of the participants120(63.5%) alwaysattend educational sessions or counseling on malaria prevention during your antenatal visits.

The Preventive practices of Malaria in pregnancy among pregnant women attending selected antenatal clinics in Abeokuta, Ogun State

Preventive practices of Malaria in pregnancy among pregnant women	**Frequency(N)**	**Percentage(%)**
How often do you sleep under an insecticide-treated bed net (ITN) every night		
Always	77	40.7
Sometimes	47	24.9
Never	65	34.4
Total	189	100
How often do you take prescribed anti malaria tablets for malaria prevention		
Always	121	64
Sometimes	45	23.8
Never	23	12.2
Total	189	100
How often do you seek prompt medical care when experiencing symptoms suggestive of malaria during your pregnancy		
Always	181	95.8
Sometimes	6	3.2
Never	2	1.1
Total	189	100
How often do you avoid travelling to malaria-endemic areas during your pregnancy		
Always	113	21.2
Sometimes	36	19.0
Never	40	59.8
Total	189	100

Continue....

How often do you ensure that their surrounding environment is clean to prevent mosquito breeding		
Always	184	97.4
Sometimes	3	1.6
Never	2	1.1
Total	189	100
How often do use mosquito repellents or sprays to prevent mosquito bites during your pregnancy.		
Always	142	75/1
Sometimes	36	19
Never	11	5.8
Total	189	100
How often do you attend educational sessions or counseling on malaria prevention during your antenatal visits.		
Always	120	63.7
Sometimes	34	18.0
Never	35	18.5
Total	189	100

The perceived barriers to implementing preventive measures for malaria among pregnant women attending selected antenatal clinics in Abeokuta

The results of the perceived barriers to implementing preventive measures for malaria among pregnant women attending selected antenatal clinics in Abeokuta, is summarized in the table 4.5 below. More than two third 131(69.3%) of the participants agreed that Lack of awareness about malaria prevention during pregnancy is a barrier to implementing preventive measures. About half of the participants 145(76.7%) agreed that financial constraints is aperceived barriers to implementing preventive measures for malaria among pregnant women. 105(55.6%) of the participants agreed that cultural beliefs is a barrier to implementing preventive measures for malaria among pregnant women. About three quarter 137(72.5%) of the participants agreed that limited availability of the preventive measures is a barrier to implementing preventive measures for malaria among pregnant women. Less than three quarter 131(69.3%) of the participants agreed that the fear of side effects associated with malaria preventive medications is a barrier to implementing preventive measures for malaria among pregnant women.

Table 4.5. The perceived barriers to implementing preventive measures for malaria among pregnant women attending the selected antenatal clinic

Preventive practices of Malaria in pregnancy among pregnant women	**Frequency(N)**	**Percentage(%)**

Continue....

How often do you sleep under an insecticide-treated bed net (ITN) every night		
Always	77	40.7
Sometimes	47	24.9
Never	65	34.4
Total	189	100
How often do you take prescribed anti malaria tablets for malaria prevention		
Always	121	64
Sometimes	45	23.8
Never	23	12.2
Total	189	100
How often do you seek prompt medical care when experiencing symptoms suggestive of malaria during your pregnancy		
Always	181	95.8
Sometimes	6	3.2
Never	2	1.1
Total	189	100
How often do you avoid travelling to malaria-endemic areas during your pregnancy		
Always	113	21.2
Sometimes	36	19.0
Never	40	59.8
Total	189	100
How often do you ensure that their surrounding environment is clean to prevent mosquito breeding		
Always	184	97.4
Sometimes	3	1.6
Never	2	1.1
Total	189	100
How often do use mosquito repellents or sprays to prevent mosquito bites during your pregnancy.		
Always	142	75/1
Sometimes	36	19
Never	11	5.8
Total	189	100

Continue....

How often do you attend educational sessions or counseling on malaria prevention during your antenatal visits.		
Always	120	63.7
Sometimes	34	18.0
Never	35	18.5
Total	189	100
percieved barriers to implementing preventive measures	**Frequency(N)**	**Percentage (%)**
Lack of awareness about malaria prevention		
Agree	131	69.3
Neutral	23	12.2
Disagree	35	18.5
Total	189	100
Financial constraints		
Agree	145	76.7
Neutral	18	9.5
Disagree	26	13.8
Total	189	100
Cultural beliefs		
Agree	105	55.6
Neutral	31	16.4
Disagree	53	28
Total	189	100
limited availability of the preventive medication		
Agree	137	72.5
Neutral	12	6.3
Disagree	40	21.2
Total	189	100
The fear of side effects associated with malaria preventive medications		
Agree	131	69.3
Neutral	12	6.3
Disagree	46	24.3
Total	189	100

Association between sociodemographic characteristics and level of Knowledge of Malaria in Pregnancy In selected Antenatal clinics in Abeokuta.

Table 4.6 below shows that the sociodemographic factors assesed which included age(p=0.391), education level(p=0.113), number of previous

pregnancies (0.199), Trimester (0.608), Antenatal Clinic (0.878), were not significantly associated with level of knowledge. While, occupation (p=0.031) was significantly associated with level of knowledge.

Association between sociodemographic characteristics and level of Knowledge of Malaria in Pregnancy in selected antenatal clinics in Abeokuta

Variable	Chi square	P-value
Age*level of Knowledge		
18-23 years 24-29 years 30-34 years 35-40 years Total	3.005	0.391
Educational Level *level of Knowledge		
Primary Education Secondary Education Tertiary Education Total	4.364	0.113
Occupation *level of Knowledge	6.919	0.031
Unemployed Employed Self employed Total	6.919	0.031
Number of previous Pregnancies	5.996	0.199
Trimester	0.996	0.608
First Second Third Total	0.996	0.608
Antenatal Clinic		
FMCA OAMH Oke-ilewo Total	0.259	0.878

Discussion, Conclusion and Recommendations

Knowledge of Malaria in Pregnancy (MiP)

Studies show that while general awareness of malaria among pregnant women in sub-Saharan Africa is high, there are significant gaps in their knowledge of malaria in pregnancy (MiP). For instance, in a study conducted in Lagos, Nigeria, over 96% of women were aware that mosquitoes transmit malaria[8].

Understanding of MiP-specific risks also varies. Many women cannot list the dangers malaria poses to either the mother or the fetus. For example, 27% of women in Lagos could not identify any maternal complications, and more than half (51.6%) were unaware of the risks to the fetus[8].

Awareness of preventive measures such as insecticide-treated nets (ITNs) and intermittent preventive treatment in pregnancy (IPTp) is generally high, but comprehension is limited. While most women have heard of ITNs (up to 99% in some regions), their knowledge of IPTp is often poor.

Perceptions of Malaria in Pregnancy

Most pregnant women in sub-Saharan Africa perceive malaria as a serious illness, but there are still misunderstandings about its specific effects during pregnancy. While most could identify general malaria symptoms like fever and headache, their understanding of the increased vulnerability during pregnancy was limited.

Although malaria is commonly seen as dangerous, many pregnant women underestimate its risks during pregnancy particularly its potential harm to the fetus. Misconceptions around the purpose of SP and insufficient risk recognition still exist, as seen in our findings

Preventive Practices

The uptake of malaria prevention practices such as ITN use and IPTp administration varies widely. According to the 2013 Nigeria Demographic and Health Survey (NDHS), only 17% of pregnant women

reported sleeping under an ITN the night before the survey, and just 14.6% took at least two doses of IPTp (NPC & ICF International, 2014). In Abuja, a clinic-based study reported slightly better figures: 24.6% ITN use and 15.9% IPTp coverage [13]. [10]A community survey in Lagos revealed only 24.1% ITN usage and 36.9% uptake of at least one IPTp dose[8].

Barriers to Effective Prevention

Several factors hinder effective malaria prevention during pregnancy. A major barrier is limited knowledge. Many women lacked knowledge about who should take SP and how many doses are required[10]

Health system issues also contribute. A study in Abuja revealed that public health facilities often lacked essential supplies: many did not provide free SP, and women were required to pay for the drug and even cups of water needed to take it[10]. In addition, negative attitudes from health workers and long waiting times discouraged women from seeking care[14].

Also Misconceptions about ITNs such as discomfort or doubts about their effectiveness further reduce their usage[14]. Our study reflects many of these findings. Respondents commonly cited fear of side effects, lack of clear information, and preference for traditional remedies as reasons for poor compliance with recommended malaria prevention practices.

Association between sociodemographic characteristics and level of Knowledge of Malaria in Pregnancy

In this study the sociodemographic factors were tested with the level of knowledge. It revealed that age(p=0.391), education level(p=0.113), number of previous pregnancies (0.199), Trimester (0.608), Antenatal Clinic (0.878), were not significantly associated with level of knowledge of MiP. This is not in support with a study whose observation showed that there was a significant association between education and level of knowledge (p=<0.001)[15]. Similarly in another study, occupation (p=0.031)was proven to be significantly associated with level of knowledge[8].

Implications of Findings to Nursing

This study fills the gap in data regarding a persistent contributor to maternal and fetal mortality in Nigeria. Information gathered from the participants show that they

- Research: This study has added to the body of Nursing Knowledge by showing that age, Educational level, number of previous pregnancies, Trimester of pregnancy, Antenatal Clinic attended does notaffects the level of knowledge on Malaria in pregnancy. Also this will serve as existing literature for upcoming studies.
- Nursing Practice: The study highlighted that less than half 40.7% of the population slept under an insecticide-treated bed net (ITN) every night during pregnancy, and this makes the majority of the population to be at risk of malaria during pregnancy. Therefore, it is recommended that the nurses should reinforce the teachings on benefits of sleeping under insecticide treated bed net in order to improve pregnancy experience of the expectant mothers.
- Nursing Education: Malaria prevention tactics like clearing of bushes and regular cleaning of gutters, eating balanced diet and proper hydration should be reinforced to Nursing students, especially the ones who will be practicing in rural environments where there might be limited availability of Anti malaria kits like insecticide spray, Mosquito nets, and mosquito repellent.
- **Curriculum Development:** Nursing programs should incorporate [new knowledge or skills into their curricula to ensure that future nurses are well-prepared to describe how this knowledge or skill will be applied.
- **Training Programs:** It is essential to develop training programs focused on [specific area] to enhance nurses' competencies in [describe the skills or knowledge to be gained].

Limitations

This study is subjected to the following limitations

- Funds: Financial constraints prevented the researcher to cover large population that could have been used to generate findings.
- Schedule: The researcher had limited time to combine the study with other academic activities.

Summary

This study was aimed to assess the knowledge, perception, and preventive practices for Malaria in Pregnancy among pregnant women attending antenatal unit of Federal Medical Centre, Abeokuta, Ogun State. The study used a descriptive cross-sectional survey using quantitative approach and data was gathered using a researcher administered questionnaire, adapted from[8]. Data was analyzed using Statistical package for social scientists (SPSS) version 22.0 and the results were presented in tables and figures. The research were set and answered accordingly.

Conclusion

From the results therefore it can be concluded that:

- The majority of patients exhibited High level of knowledge on Malaria in pregnancy.
- There was no significant relationship found between socio-demographic characteristics (Age, education level, number of previous pregnancies,PregnancyTrimester, Antenatal Clinic being attended) and Level of knowledge with the exception of occupation which showed a great significant association with level of knowledge on Malaria in pregnancy
- As a result, the research findings revealed a weak correlation between a number of sociodemographic characteristics and level of Knowledge on Malaria in Pregnancy. Therefore the null hypothesis, which states that there is no meaningful corelation between sociodemographic characteristics and level of knowledge on Malaria in pregnancy, is accepted. Thus the alternate hypothesis is rejected.
- Overall, these findings highlight the critical importance of continuing efforts to prevent and treat MIP through effective public health strategies, community education, and improved healthcare services.
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