

IMPACT OF CULTURE ON THE PREVELENCE OF MALARIA AMONG PREGNANT WOMEN IN FEDERAL MEDICAL CENTRE MAKURDI BENUE STATE

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Abstract

This study was carried out in federal medical Centre, Makurdi local government area of Benue State. The objectives of the study include to assess the impact of culture on the prevalence of malaria among pregnant women, to identify the influence of culture on the use of malaria preventive measures, to identify the effects of non-utilization of malaria preventive measures among pregnant women and to verify ways of promoting the use of malaria preventive measures which served as guide to the researcher. The rationale of the study was to create and promote more awareness to the pregnant women about malaria and its mode of transmission and prevention. The study was significant because it will help the pregnant women and the public to improve their treatment seeking behavior. It will also enlighten the pregnant women and the public on the preventive measures of malaria infection such as use of insecticide treated net and mosquito repellent. The instrument used for data collection was questionnaire. The total population was 1000 and the sample size of 200 was selected. Data collected were analyzed and presented in tables with frequencies and percentages. The major findings of this research were that 60% of the respondents believed that malaria is caused by witches and wizards, 30% anger of the gods while 40% of the respondents said is as a result of bad foods. All these beliefs made 70% of them use traditional medicine instead of orthodox medicine. Cultural beliefs and practices are amongst the factors influencing the prevalence of malaria among pregnant women. It is recommended that communities should be involved in implementing the plan about malaria preventive measures and nurses and midwives should put more effort in creating awareness on malaria preventive measures and mode of malaria transmission. Health care providers should also increase their efforts in health educating the pregnant women and the communities at large on the importance of antenatal clinic and environmental hygiene. Government should also train more health care providers and post them to rural areas to create awareness on malaria infection, its mode of transmission and preventive measures.

Keywords: Culture, Prevalence, Malaria, Pregnant Women

Introduction

Malaria is a febrile illness caused by plasmodium – a parasite transmitted through the bite of an infected female Anopheles mosquito. It is a common complication in the tropical environment and one of the major causes of high maternal and neonatal morbidity and mortality rates in the tropics (Adesokan, 2014).

According to the World Health Organization (WHO) (2015) 95 countries and territories had on going malaria transmission, about 3.2 billion people, almost half of the world's population are at risk of malaria. WHO estimated that there were roughly 2.4 million new cases of malaria worldwide (range: 149-303 million) and an estimated 438,000 malaria deaths, in 2015 (range: 236,000 - 635,000). A decline of 48% most death in 2015 was in the WHO Africa Region (90%), followed by the WHO South East Asia Region (71%) and the WHO Eastern Mediterranean Region (2%). Between 2000 – 2015, Malaria incidence rate fell by 37% globally and by 42% in Africa and mortality rate fell by 60% globally and 66% in the Africa Region.

Malaria is a major public health problem in Nigeria. It accounts for more cases and deaths than any other country in the world due to some factors such as cultural factor. Culture is a view of the world and set of traditions, a specific social group uses and transmit to the next generation (Adele, 2014).

According to University of Washington (2012), Religion, Spirituality and kinship ties may have an important role in order adult's understanding and treatment of illness. Some older adults may view illness and death as a natural part of life, or believe illness as a result of natural causes, improper diet or eating habits, exposure to cold air or wind, the will of God for improper behaviour or a lack of spiritual balance. Some older adults may delay seeking medical care, preferring self-treatment and giving God a chance to heal, or may seek care from folk healers, lay advice, home remedies and prayer to treat illness. Many American Indians believe that harmony among the body, heart, mind and soul contribute to one's overall health (University of Washington, 2012), and that illness may be caused by the break of sacred tribal taboos, unhealthy relationships with humans or nature, or by witchcraft (Salimbene, 2014). The person may turn to the western medicine for treatment of the symptoms of illness, but may also seek traditional healers to address the disharmony that caused it (University of Washington, 2012).

The influence of culture on health is vast. It affects perceptions of health, illness and death, beliefs about causes of disease, approaches to health promotion, how illness and pain are experienced and expressed, where patients seek help, and the types of treatment patients prefer (Kodjo, 2009).

According to Federal Ministry of Health (FMH) (2012), malaria is a risk for 97% of Nigeria's population; the remaining 3% of the population live in the malaria highland. There are an estimated 100 million malaria cases with over 300, 000 deaths per year. Malaria contribute to an estimated 11% of maternal mortality, 60% of out-patient visits, 30% childhood mortality, 25% of infant's mortality and associated with 11% of maternal death.

Malaria infection during pregnancy has been shown to have harmful effects on the mother, her fetus and the new born, some of the effects includes: Anemia, still birth, preterm labor, maternal death, renal failure, neonatal insufficiency. It is on this background that the researcher wants to investigate the impact of culture on the prevalence of malaria among pregnant women in federal medical Centre, Makurdi Local Government Area of Benue State.

Objectives of the Study

- i. To assess the impact of culture on the prevalence of malaria among pregnant women
- ii. To identify the influence of culture on the use of malaria preventive measures.
- iii. To identify the effects of non-utilization of malaria preventive measures among pregnant women
- iv. To verify ways of promoting the use of malaria preventive measures.

Research Questions

- i. What is the impact of culture on the prevalence of malaria among pregnant women?
- ii. What are the influences of culture on the use of malaria preventive measures?
- iii. What are the effects of the non-utilization of malaria preventive measures among pregnant women?
- iv. What are the possible ways of promoting the use of malaria preventive measures?

Methodology

A descriptive research design was used in this study as it allows sequential collections of data which were collected from the respondents to determine the impact of culture on the prevalence of malaria among pregnant women.

Settings

The research study was carried out in federal medical Centre, Wadata, Makurdi local government area of Benue State. Federal medical Centre Makurdi is a tertiary health institution owned by the federal government on Nigeria. It is bounded in the North by AtikuAbubakar road which leads to Benue Stat Government House, to the East by the Holy Ghost Parish, Makurdi, Holy Ghost primary school and part of Lobi quarters, in the West by J.S. Tarka and across the road is Madikpo area which extends to McCarthy Stadium and N.K.S.T church, Wadata.

The federal medical Centre started in 1932 as General Hospital, Makurdi, built for those that were constructing the Makurdi Bridge across the River Benue. The centre used as an emergency area for treating those who sustained injuries during the construction of the bridge.

In 1995, the hospital was converted to Federal Medical Centre, Makurdi which was primarily designed as a referral point of the secondary level of health care facilities in and outside the state. The hospital is used also for training of Nurses, Midwives, Doctors on house manship, Pharmacist on their inter relationship and other health practitioners. The first medical was Dr. Agbikiye in 1995 followed by Dr. Dokumo in 2000.

For the purpose of effectiveness and efficiency the hospital believes in departments which are medical and surgical department, nursing department, administrative department, pharmacy and medical record. The department has units and subunits function independently and interdependently for maximum satisfaction of all health consumer surgical department accident and emergency units' family planning units, ante natal unit and psychiatric unit are located at Apir which is a ward under federal medical Centre, Makurdi local government area Benue State

Target population

The target population for this study consists of pregnant women who attended antenatal clinics at federal medical Centre Makurdi from 2015-2016 and their total population was 1000.

Sampling techniques

A sample is that portion of a population which is studied closely in order to gain some knowledge or make a generalization about the population its representation.

Sampling techniques is the process of selecting a subsection of population for study with the sub-group to the entire population. Basically two methods of sampling techniques were used, the systematic sampling and simple random sampling techniques.

Systematic Sampling

Systematic sampling is defined as a method of selecting sample member from a large population according to a random starting point and a fixed periodic interval of 2015-2016. Typically, every member is selected from the total population for inclusion in the sample population.

A sample form was formed using records from register of health clinic, the total population was 1000.

Simple random sampling

Simple random sampling can be defined as a process of choosing a subset of individual (a sample) from a large set (a population). Each individual is chosen randomly and entirely by chance such that each individual has the same probability of being chosen at any stage during the same process.

To determine the sample interval, the population was used, the total is within 1000, and the sample size is 200.

To determine sample interval = $\frac{\text{target population}}{\text{Sample size}}$

$$= \frac{1000}{200} = 5$$

To determine the sample start number 1 – 5 were written on 5 pieces of paper and put in a bag, one was picked and opened which turned out to be number 2, and number 2 became the sample start. The point 2 respondent on the sample frame was started with the next number 7 and then 12 and continued in the sequence until the sample size of 200 was drawn from the population of 1000.

Instrument for data collection

The instrument used for data collection was questionnaires; documentary source (maternity unit register) was also used. The questionnaire is divided into sections A and B which are made up of close ended questions. Section A comprised of personal data of the questions on main topic. All

together are twenty three questions to be answered. The questionnaires were formulated from the research objectives, literature reviews and research questions aimed at achieving the objectives of the study.

Validity / reliability of the instrument

The questionnaires designed by the researcher to elicit responses from the respondents were drafted and given to the supervisor who validated it to ensure that it measured what it is supposed to measure.

A pilot study was conducted in a nearby health care and the result proved the instrument to be reliable.

Method of data collection

The researcher collected data using questionnaires and clinical records. The researcher visited the hospital and confirmed their antenatal visiting days. The researcher met the matron in charge of the antenatal clinic and took permission from her to carry out the procedures. The questionnaire was administered face to face to the respondents to ensure co-operation of the selected respondents. Clarifications as regards to the purpose of the study were clearly given. Among the selected respondents there were educated and non-educated once. The educated once answered the questions by themselves and returned while non-educated once where answering through the help of the matron who made the interpretation for them and 100% were returned. The past documentary records of prevalence of malaria in pregnancy in 2014 were 600 cases, in 2015 were 500 cases while in 2016 were 300 new cases in Federal Medical Center, Makurdi.

Method of data analysis

The data collected were logically analyzed with the aid of descriptive statistical measures. The data collected were presented in frequency distribution table and analyzed in percentage to answer the research questions.

Results

Demographic attributes of respondents

Various demographic characteristics of respondents were presented using the following table below:

Table 1: Showing the distribution of respondents according to demographic variables.

Age (in years)	Frequency	Percentage (%)
15 – 20	50	25
21 – 29	90	45
30 and above	60	30
Total	200	100
Marital Status		
Single	30	15
Married	124	62

Divorced	36	18
Widowed	10	5
Total	200	100
Number of children		
None	80	40
1 – 4	100	50
5 and above	20	10
Total	200	100
Educational level		
Primary	70	35
Secondary	80	40
Tertiary	30	15
None of the above	20	10
Total	200	100
Religion		
Christianity	80	40
Islam	100	50
None of the above	20	10
Total	200	100
Occupation		
Farming	60	30
Trading	100	50
Studying	10	5
Civil service	30	15
Total	200	100

Source: Field Survey, 2020

From the demographic variables in table 1 above, age distribution of the respondents shows that the respondents who are within the ages of 15 – 20 years are 50 (25%) of the total respondents. Respondents within the age range of 21 – 29 years are 90 (45%), also those within the age of 30 years and above are 60 (30%) of the total respondents. With respond to the marital status in table 4.1 above,

30 (15%) of the respondents are single, 124 (62%) are married, 36 (18%) are divorced and 10 (5%) of the total respondents are widowed.

Table 1 above also shows the number of children of the respondents. 80 (40%) of the respondents had not had any child yet, 100 (50%) have between 1 – 4 children and 20 (10%) had 5 children and above.

The educational level of the respondents is also shown in the table 1 above and from the result, 70 (35%) had primary level of education, 80 (40%) secondary level, 30 (15%) tertiary level of education and 20 (10%) had not gone to school. In respect to religion, 80 (40%) are Christian, 100 (50%) are Islam and 20 (10%) did not indicate any of the opinions given. Table 1 also indicates the occupational status of the respondents, the farmers are 60 (30%), traders are 100 (50%), and students are 10 (5%) while civil servants are 30 (15%).

Table 2: Showing the distribution of respondents on whether they have heard about malaria in pregnancy or not

Options	Frequency	Percentage (%)
Heard about malaria in pregnancy	100	50
Not heard	100	50
Total	200	100

Sources: Field Survey, 2020

Table 2 above shows that 100 (50%) of the total respondents have heard about malaria in pregnancy, another 100 (50%) have not heard about it before.

Table 3: Showing the distribution of respondents on the cause of malaria in pregnancy.

Options	Frequency	Percentage %
Witches and Wizards	120	60
Anger of the gods	60	30
Mosquito bites	20	10
Total	200	100

Sources: Field Survey, 2020

Table 3 above shows that out of the total number of respondents, 120 (60%) said malaria in pregnancy was caused by witches and wizards, 60 (30%) said anger of the gods while 20 (10%) said is as a result of mosquito bites.

Table 4: Showing the distribution of respondents on other causes of malaria

Options	Frequency	Percentage %
Staying under the sun	30	15
Bad food	80	40
Certain vegetables	60	30
None of the above	30	15
Total	200	100

Source: Field Survey, 2020

Table 4 above shows that out of the total number of respondents, 30 (15%) said that malaria is caused by staying under the sun, 80 (40%) said bad foods, 60 (30%) said certain vegetable while 30 (15%) said malaria was caused by none of the options given.

Table 5: Showing the distribution of respondents on the awareness of malaria preventive measure.

Options	Frequency	Percentage (%)
Yes	150	75
No	50	25
Total	200	100

Sources: Field Survey, 2020

The above table 5 shows that 150 (75%) of the respondents are aware of malaria preventive measure while 50 (25%) are not aware.

Table 6: Showing the distribution of respondents on the preventive measures of malaria infection.

Options	Frequency	Percentage (%)
Use of insecticide treated nets	30	15
Use of drug	30	15
Use of traditional medicine	140	70
Total	200	100

Source: Field Survey, 2020

Table 6 above shows that 30 (15%) of the respondents said that malaria can be prevented through the use of insecticide treated nets. 30 (15%) said the use of drug while 140 (70%) said that malaria can be prevented with the use of traditional medicines.

Table 7: Showing the distribution of the respondents on whether they have an insecticide treated net or not

Option	Frequency	Percentage (%)
Yes	160	80
No	40	20
Total	200	100

Source: Field Survey, 2020

The table above shows that 160 (80%) of the respondents have insecticide treated net while 40 (20%) do not have.

Table 8: Showing the distribution of respondents on whether they sleep under the insecticides treated net or not.

Option	Frequency	Percentage (%)
Yes	80	40
No	120	60
Total	200	100

Source: Field Survey, 2020

Table 8 above shows that 80 (40%) of the respondents sleeps under the insecticide treated net while 120 (60%) do not.

Table 9: Showing the distribution of respondents on the reason for not using the insecticide treated net.

Option	Frequency	Percentage (%)
Insecticide treated net is meant for dead person	60	30
Sleeping under it makes me feel hot	20	10
I prefer using it for farm	40	20
My culture forbids it's use	80	40
Total	200	100

Source: Field Survey, 2020

The table above shows that 60 (30%) of the respondents believe that insecticide treated net is meant for dead person, 20 (10%) said that they feel hot while under the net, 40 (20%) prefers using it for farming while 80 (40%) said that their culture forbids its use.

Table 10: Showing the distribution of respondents on whether they have ever had malaria during pregnancy.

Option	Frequency	Percentage (%)
Yes	180	90
No	20	10
Total	200	100

Source: Field Survey, 2020

Table 10 above shows that 180 (90%) of the respondents have had malaria during pregnancy while 20 (10%) said they never had.

Table 11 Showing the distribution of the respondents on the signs and symptoms they experienced when they had malaria during pregnancy

Option	Frequency	Percentage (%)
Fever	50	25
General body pain	50	25
All of the above	100	50
Total	200	100

Source: Field Survey, 2020

Table 11 above shows that 50 (25%) of the respondents said fever, another 50 (25%) said general body pain while 100 (50%) said they experienced all the signs and symptoms given in the options.

Table 12: Showing the distribution of the respondents on the type of treatment they received when they had malaria during pregnancy.

Option	Frequency	Percentage (%)
Orthodox medicine	50	25
Traditional medicine	150	75
Total	200	100

Source: Field survey, 2020

Table 12 above shows that 50 (25%) of the respondents used orthodox medicine when they had malaria during pregnancy while 150 (75%) uses traditional medicine.

Table 13: Showing the distribution of the respondents on whether they are aware of the effect of malaria on pregnancy or not.

Option	Frequency	Percentage (%)
Yes	70	35
No	130	65
Total	200	100

Source: Field survey, 2020

Table 13 above shows that 70 (35%) were aware of the effect of malaria in pregnancy while 130 (65%) were not aware.

Table 14: Showing the distribution of the respondents on the effects of malaria on pregnancy

Option	Frequency	Percentage (%)
Anemia	50	25
Still birth	60	30
None of the above	90	45
Total	200	100

Source: Field survey, 2020

The table above shows that 50 (25%) of the respondents said that effect of malaria in pregnancy is anemia, 60 (30%) said still birth while 90 (45%) said none of the options given.

Table 15: Showing the beliefs of the people on whether maternal death is one of the complications of malaria in pregnancy

Option	Frequency	Percentage (%)
Yes	20	10
No	180	90
Total	200	100

Source: Field survey, 2020

Table 15 above shows that 20 (10%) of the respondents believe that malaria can cause maternal death while 180 (90%) of the respondents do not believe.

Table 16: Showing the distribution of respondents on what they should do when they have malaria.

Option	Frequency	Percentage (%)
Seeking for medical care	30	15
Consulting the gods of the land	80	40
Taking traditional medicine	90	45
Total	200	100

Source: Field survey, 2020

The table above shows that 30 (15%) of the respondents said they should seek for medical care when they have complicated malaria, 80 (40%) said consulting the gods of the land, while 90 (45%) said they should go to the traditional medicine.

Table 17: Showing the distribution of the respondents on their opinions of involving the community in implementing the malaria preventive measure.

Option	Frequency	Percentage (%)
Yes	150	75
No	50	25
Total	200	100

Source: Field survey, 2020

Table 17 above shows that 150 (75%) of the respondents said the community should be involved in implementing the malaria preventive measures while 50 (25%) said no.

Table 18: Showing the distribution of the respondents on how the use of malaria preventive measures could be promoted.

Option	Frequency	Percentage (%)
By creating awareness on the importance of the use	40	20
Involving the community on the malaria preventive measure	100	50
Government should train and post health workers to rural	50	25

areas for more awareness		
None of the above	10	5
Total	200	100

Source: Field survey, 2020

Table 18 above shows that 40 (25%) of the respondents said that creating of awareness on the malaria preventive measure can help, 100 (50%) said the community should be involved in malaria preventive measure, 50 (25%) said that government should train and post health workers to the rural areas for more awareness while 10 (5%) of the respondents do not agree to the above options given.

Discussion

Research Question 1

What is the impact of culture on the prevalence of malaria among pregnant women?

Table 3 shows that 60% of those who have heard about malaria believed that malaria can be as a result of witches and wizards, 30 % said anger of the gods while 10% said mosquito bites. This finding agreed with the study that was carried out in Ibadan which shows that 60% of pregnant women believed that malaria is as a result of witches and wizards and these gave rise to 60% of maternal death. (Catherine, 2015). In support of the above finding WHO, (2015) said that socio-cultural beliefs about the curability have direct correlation with the treatment seeking behavior of the community.

Table 4 also shows that 15% of the respondents believed that other causes of malaria was staying under the sun, 40% said bad foods, 30% certain vegetables, while 15% disagreed on the above causes. Viewing the above finding, it agrees with the study that was carried out in Oyo-Ekiti in Nigeria that apart from the knowledge of the transmission of malaria, individual belief about malaria itself may have influence on their health seeking behavior (Yady, 2010).

Research Question 2

What is the influence of culture on the use of malaria preventive measure?

Table 5 shows that 75% were aware of malaria preventive measure while 25% were not aware. Supporting the above finding, Gikandi& Noor (2010) stated that the surveys in Malawi and Kenya revealed that there is high antenatal clinic attendance of 88% and 74% respectively, yet a far lower proportion of women receive two closes of intermittent preventive drugs (44% and 22%) respectively.

Table 6 shows that 15% of respondents uses the insecticide treated nets, 15% use the drug while 70% uses the traditional medicines as preventive measures of malaria infection. This finding supports Garba, (2013) who said that cultural practice had made some societies in Nigeria not to use the long lasting insecticide treated mosquito net rather, they use it on their farm.

Table 7 shows that 80% of respondents have an insecticide treated net while 20% do not have.

Table 8 shows that 40% of respondents uses the insecticide treated net, while 60% do not use it.

Table 9 shows that 30% of respondents said that the net is meant for dead persons, 10% said that sleeping under it makes them felt hot, 20% said that they prefer using it for farming while 40% of the respondents said that their cultural beliefs forbids its use.

The above findings agrees with Steven&Menedez (2010) who added that the efficacy and the effectiveness of these interventions depends on the attitudes and behaviors of pregnant women and the wider community which are shaped by social and cultural factors and such factors are particularly relevant to the demands for and supply of malaria in pregnancy intervention. Attitude towards and understanding of pregnancy, pregnancy care, malaria and other illness can influence how, where and when pregnant women seek malaria prevention and treatment.

Research Question 3

What are the effects of non-utilization of malaria preventive measure among pregnant women?

Table 10 shows that out of the total respondents, 90% have malaria during pregnancy before while 10% have not experienced it before.

Table 11 shows that 25% of people that experience malaria during pregnancy experience fever, 25% noted general body pain while 50% experience both.

In support with the above finding, Berman (2011) added that the first sign of malaria in pregnancy are general body pain, fever, mild cough nausea and vomiting and anorexia.

Table 12 shows that 25% of the respondents use orthodox medicine while 75% uses traditional medicine.

The above findings agrees with the University of Washington (2008) which said that instead of people to seek orthodox medicine when they are sick, they turn to traditional healers to address the disharmony that cause it. In agreement with the above statement Lamallen (2011) said that cultural values formed early in life strongly influence the manner in which people plan for child bearing and respond to health and illness.

Table 14 shows that 25% of the respondent agreed that anemia is an effect of malaria on pregnancy, 30% said still birth while 45% said none of the above. Based on the finding above, the researcher found out that poor knowledge on effect of malaria on pregnancy can contribute to the prevalence of malaria among pregnant women in federal medical center Makurdi, Benue State. The finding supports Fried (2012) who suggested that antenatal services should be strengthened to include detailed health education on malaria and its effect on pregnancy.

Table 15 shows that 10% of respondents believe that maternal death can be due to malaria infection while 90% do not believe.

Table 16 shows that 15% of the respondents said that seeking for medical care is the best, 40% said consulting the gods of the land while 40% of the respondents take traditional medicine. Based on the above finding, the researcher found out that non utilization of malaria preventive measure during pregnancy increase the effect of malaria, such as anemia, preterm labor, abortion, low birth weight, fetal death and maternal death.

In support with the above finding, Brabin (2016) added that malaria during pregnancy reduces birth weight of the neonate.

Research Question 4

What are the possible ways of promoting the use of malaria preventive measures?

Table 17 shows that 75% of the respondents agreed on involving the community during the implementation of the malaria preventive measure while 25% do not agree due to their cultural beliefs.

Table 18 shows that 20% of the respondent agreed on creating awareness on the importance of the use of malaria preventive measure as way of promoting the use of it. 50% said involving the community in implementation of the project, 30% said that government should train and post health workers to rural areas for more awareness while 5% do not agree on any of the above ideas.

The above finding support Babalola (2013) when he said that there is need to create and promote more awareness preventive measure among pregnant women.

Enato, Okhamate&Ojir (2011) suggested that community should actively participate in design and implementation of health and development of project related to malaria preventive measure.

Based on the finding, the researcher observed that involving the community in implementation of any project related to malaria preventive measure can help in promoting the use of malaria preventive measures.

Conclusion

Based on the findings, it was concluded that some of the cultural beliefs and practices such as witches and wizards, anger of the gods, staying under the sun, bad foods, certain vegetables and patronizing traditional medicine more than orthodox medicine contribute to the prevalence of malaria among pregnant women in Federal Medical Centre, Makurdi Local Government Centre, Benue State.

Recommendations

Based on the findings of this study, the researcher makes the following recommendations.

- i. Nurses and midwives should create more awareness on causes of malaria infection during antenatal visit
- ii. Health education on the importance of seeking orthodox medicine when sick should be stressed.
- iii. Involvement of community on implementation of malaria preventive measures should be ensured.
- iv. Government should train and post health workers to rural areas for more awareness on malaria, its cause, effects and preventive measures.

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