

Utilization of control measures for malaria among pregnant women in Oyi LGA

Ananomo, L.E. (Ph.D.)^{1*}, Chukwuemeka, A.E.² Nnaemezie Nkiru O.³

Department of Human Kinetics and Health Education, Nnamdi Azikiwe University Awka, Nigeria

ABSTRACT

The incidence of malaria among pregnant women malaria poses health risk to the life of the unborn baby. This has raised concerns as to whether the pregnant women utilize the measures for controlling malaria. The purpose of the study was to ascertaining the utilization of control measures for malaria among pregnant women in Oyi Local Government Area of Anambra State. Two research questions gavedirection to the study. Survey research design was used for the study. The sample for the study consisted of 200 pregnant women obtained through accidental sampling techniques were used. 16-item questionnaire was used as instrument for data collection after validation by three experts. The findings revealed that while many pregnant women do not utilize prophylaxis as a control measure for malaria, many others utilize environmental management, vector control and personal control measures of malaria. In line with the findings of the study, it was recommended that ministry of health should make conscious efforts in highlighting the added benefit of using malaria preventive measures such as prophylaxis during pregnancy as a deliberate strategy to protect the new born against malaria infections.

INTRODUCTION

Malaria is a life threatening disease caused by a parasite known as plasmodium transmitted through bite of an infected anopheles mosquito. Pregnant women appear vulnerable because their immunity has affected by pregnancy. It is obvious that malaria in pregnancy causes tremendous strain in already weakened health systems in endemic countries. Despite the introduction of control measures in many parts of the world over few decades, the impact of malaria on human population continues to increase. A pressing need to reduce high morbidity and mortality rate that results from this threat brings about the initiation of roll back malaria by (RBM) partners.

Such control measures include utilization of: Insecticide Treated Net (ITNs) Intermittent Preventive Treatment (IPT), prophylaxis, environmental management, vector control measure, personal protection and Effective Case Management of Malaria and Anaemia (ECMMA). The present study will focus on the following control measures: prophylaxis, environmental management, vector control measure, personal protection.

The observation of the researcher in Oyi LGA revealed that not a few pregnant women are bedeviled by malaria which poses health risk to the life of the unborn baby. This has raised questions as to whether the pregnant women utilize the measures for controlling malaria.

Malaria in Pregnancy

For women in their first pregnancy the reduction in birth weight is approximately two thirds of what is associated with plasmodium falciparum but with plasmodium vivax, the effect appears to increase with successive pregnancies. In low transmission settings where women of

reproductive age have relatively little acquired immunity to malaria, malaria in pregnancy is associated with anaemia and increase risk of severe malaria. It may led to spontaneous abortion, still birth prematurity and low birth weight. In such settings malaria usually affects all pregnant women regardless of the number of times they have been pregnant. Infection with plasmodium vivax or plasmodium falciparum leads to chronic anaemia and placental malaria infection reducing the birth weight and increasing the risk of neonatal death.

Producing good estimate of the global burden of malaria in pregnancy is difficult due to poor numerator (no of women affected by malaria in pregnancy) and the denominator (population at risk) data. However globally, 125 million women are at risk of malaria every year. In sub-sahara Africa most burden by malaria is thought to cause as many as 10,000 cases of malaria-related deaths in pregnancy, mainly due to severe maternal anaemia (WHO, 2010).

Only recently, Nigerian scientists discovered that a lot of pregnancy related problems like low birth weight, severe anaemia, prenatal death, cerebral malaria, abortion and premature labour, among others were due to malaria. Indeed, malaria is believed to be the most important parasitic disease that affects human body.

Control Measures for Malaria

Malaria prophylaxis as a control measure

There are a number of drugs that can help prevent malaria while travelling in areas where it exists. Most of these drugs are also sometimes used in treatment. Chloroquine may be used where the parasite is still sensitive. But most plasmodium is sensitive to one or more medications. One of these medications-mefloquine (Lariam) doxycycline (available generically

or the combination of atovaquone and proguanil hydrochloride (malarone) is frequently needed. Doxycycline and proguanil combination are the best tolerated.

Federal Ministry of Health (FMH) has recommended the use of the drug sulphadoxine pyrimethamine (SP) as the best option in intermittent preventive treatment especially in pregnant women. Stekeke (2006) stated that the drug has not been considered for substitution as is the case with chloroquine because field experience has shown that it is actually doing better than chloroquine in the control of malaria in Nigeria. He also said that the sulphadoxine pyrimethamine drug has been found to reduce the incidence of malaria, anaemia placental parasitaemia and the incidence of low birth weight associated with malaria.

Vector Control as a Control Measure

Vector control for the control of malaria includes: indoor residual spraying (IRS). Malaria vectors are endophilic, resting inside houses after taking a blood meal. These mosquitoes are particularly susceptible to control through indoor residual spraying (IRS). As its name implies, IRS involves coating the walls and other surfaces of a house with a residual insecticide (CDC). For several months the insecticide will kill mosquitoes and other insects that come in contact with these surfaces.

Environmental Management as a Control Measure

Destroying mosquitoes and their breeding places. Best practices to reduce the population of mosquitoes in the community. These include: Dispose unused tyres, utensils, broken bottles and coconut husks that can hold water. These are places for potential mosquito hatcheries since the mosquito breeding sites is not far-fetched it increased the potential of breeding more mosquitoes but when they are disposed the breeding of mosquitoes are reduced (WHO, 2010);

improved drainage and eliminate stagnant water; sand fill and grade pot holes; regulate water holding plants and other water receptacles for larvae; screen all windows and doors.

Use of Personal Protection as a Control Measure

In addition to the use of mosquito nets, communities should also be encouraged to employ personal protection measures against mosquito bites.

Measures that can be taken in this regard include: Use of repellent creams and knock down insecticides; wearing of protective clothing like long-sleeved shirts and long trousers in the evening; malaria can be prevented using specific and simple actions such as the use of Long Lasting Insecticide treated net (LLINS) and Intermittent Preventive Treatment (IPT) during pregnancy and use of insecticide treated nets.

The use of insecticide treated nets is effective in reducing mortality and morbidity caused by malaria between 17% and 43% in children less than five years and provides protection to pregnant women who are most susceptible to malaria ITNs (insecticide treated nets) are easy to implement compared to other vector control methods of controlling malaria. In line with the afore-mentioned, the following research questions are raised:

1. How is prophylaxis as a control measure for malaria utilized among pregnant women in Oyi L.G.A?
2. How is environmental management as a control measure for malaria utilized among pregnant women in Oyi L.G.A?
3. How is vector control measure for malaria utilized among pregnant women in Oyi L.G.A?

4. How is personal protection as a control measure for malaria utilized among pregnant women in Oyi L.G.A?

METHOD

Research design: Survey research design was adopted for the study.

Procedure: Data were collected from 200 pregnant women from two health centers in Oyi LGA using accidental sampling technique. A 16-item semi-structured questionnaire, after validation by experts was used to collect data. The questionnaire items were structured on a two point rating scale of Agree (A) and Disagree (D).

Data analysis: Mean percentage score was used to answer the research questions. In answering the research questions, the scores of the respondents on each of the items in the cluster were added up to get a summated score. The scores on each of the clusters were converted to percentage score. The mean percentage score below 50 was regarded as agree, while mean percentage score from 50-100 was regarded as disagree.

RESULTS

Table 1: Mean Score on the Utilization of Prophylaxis as a Control Measure of Malaria among Pregnant Women

	N	\bar{X}	SD	Remark
Utilization of Prophylaxis as a control measure	196	47.96	30.82	Disagree

The mean percentage score of 47.96 shows that prophylaxis is not utilized as a control measure of malaria among many pregnant women.

Table 2: Mean Score on the Utilization of Environmental Management as a Control Measure of Malaria among Pregnant Women

	N	\bar{X}	SD	Remark
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Utilization of Environmental Management as a control measure	196	81.53	19.31	Agree
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The analysis in Table 2 shows the mean percentage score of 81.53. This explains that there environmental management is utilized as a control measure of malaria among pregnant women.

Table 3: Mean Score on the Utilization of Vector Control Measure as a Control Measure of Malaria among Pregnant Women.

	n	\bar{X}	SD	Remark
Utilization of Vector control measure	196	61.33	25.55	Agree

Table 3 shows the mean percentage score of 61.33 indicating that vector control is utilized as a control measure of malaria among pregnant women Oyi L.G.A.

Table 4: Mean Score on the Utilization of Personal Protection as a Control Measure of Malaria among Pregnant Women

	N	\bar{X}	SD	Remark
Utilization of personal protection	196	80.61	25.37	Agree

Table 4 shows the mean percentage score of 80.61 indicating that personal protection is utilized as a control measure of malaria among pregnant women Oyi L.G.A.

DISCUSSION

The findings of the study revealed that many pregnant women do not utilize Prophylaxis as a control measure of malaria. This could be as a result of low awareness of prophylaxis among pregnant women. The finding of the study is in tandem with the position of Adamu (2016) who noted that majority of pregnant women did not use malaria drugs such as prophylaxis in their index pregnancy. The finding of the present study, however, contrasts the assertion of

Chukwuocha, Nwakwuo and Alinnor (2016) that many pregnant women use anti-malarial prophylaxis as control measure. This contrast could be as a result of apparent differences in sample characteristics and areas of study.

The findings of the study further revealed that environmental management is utilized as a control measure of malaria among pregnant women. This may not be separated from the fact that pregnant women have a relatively high knowledge of environmental measure for preventing malaria. Additionally, the afore-mentioned knowledge has a bearing with sensitization programmes conducted by both government and non-governmental organization on the control measures of malaria. The finding of the present study corroborates the position of WHO (2010) that environmental management measures for controlling malaria include: improved drainage and elimination of stagnant water; sand fill and grade of pot holes; regulation of water holding plants and other water receptacles for larvae; screening of all windows and doors. WHO added that these are places for potential mosquito hatcheries since the mosquito breeding sites is not far-fetched it increased the potential of breeding more mosquitoes but when they are disposed the breeding of mosquitoes are reduced.

The findings of the study, again, revealed that vector control is utilized as a control measure of malaria among pregnant women. This may be as a result of the education of pregnant women on the need to evolve an effective vector control measure for malaria. The finding of the present study is in consonance with the observation of Yusuf, Dada-Adegbola, Ajayi, and Falade (2008) that anti-vector measures for prevention of malaria during pregnancy was used with a large proportion combining with prophylaxis. This is so given that mosquitoes are particularly

susceptible to anti-vectors. As its name implies, IRS involves coating the walls and other surfaces of a house with a residual insecticide (CDC).

Additionally, the findings of the study revealed that personal protection is utilized as a control measure of malaria among pregnant women. This stems from the fact that social media is alive to their responsibility of ensuring that there is adequate information available to pregnant women on control of malaria via personal protection. The finding of the present study is in agreement with the observation of Chukwuocha, Nwakwuo and Alinnor (2016) that many pregnant women use insecticide treated nets as a control measure of malaria. This obviously the case given that bed nets form a protective barrier around people sleeping under them, however bed nets treated with an insecticide are much more protective than untreated nets. The insecticides that are used for treating bed nets kill mosquitoes as well as other insect. The insecticides also repel mosquitoes reducing the number that enter the house and attempt to feed on people inside. In addition, high community coverage is achieved, the number of mosquitoes as well as their length of life will be reduced. When this happens, all members of the community are protected regardless of whether or not they are using a bed net.

Conclusion and Recommendations

Pregnant women prioritize the use of prophylaxis, environmental management, vector control measure, personal protection as control measures against malaria. In line with the aforementioned, Government in collaboration with the non-governmental organization should continually intensify support for radio jingles on the need for pregnant women to utilize environmental management, vector control and personal control measures of malaria. More so, ministry of health should make conscious efforts in highlighting the added benefit of using

malaria preventive measures such as prophylaxis during pregnancy as a deliberate strategy to protect the new born against malaria infections.

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