

Prevention Practices, Accessibility and Availability of Roll Back Malaria Programme among Pregnant Women in Nsukka Local Government Area, Enugu State

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Abstract

Malaria is one of the most preventable causes of adverse birth outcomes. The population at the highest risk for malaria includes children, the non-immune and pregnant women. The study investigated the prevention practices, accessibility and availability of Roll Back Malaria Programme among pregnant women in Nsukka Local Government Area (LGA), Enugu State. To achieve this purpose, three research questions were posed. The descriptive survey design was used for the study. The population for the study was 1,715 pregnant women and health workers residing within the eight wards in Nsukka LGA. Purposive sampling technique was used to select a sample of 450 respondents. A 15-item researcher-structured questionnaire was used for data collection. Frequency and percentages were used for data analysis. The findings showed that the level of prevention practices of malaria among pregnant women and health workers in Nsukka LGA is very high (89.15%); accessibility to insecticide treated net among pregnant women and health workers in Nsukka LGA is moderately high (67.84%); roll back malaria programme is moderately available (68.38%) among pregnant women and health workers in Nsukka LGA. Hence, the government should establish functional enforcement agencies to enhance availability and accessibility of roll back malaria services and preventive measures for malaria infection and diseases.

Keywords: Malaria, Roll back malaria, Barriers, Pregnant women

Introduction

Malaria a deadly but preventable disease is a major cause of illness and death in humans in tropical and sub-tropical countries. Malaria has remained a major health or public health problem. Aribodor, Ugwuanyi, and Aribodor (2016) reported that malaria remains the most dreaded public health parasitic disease and a global health problem with the greatest burden in Sub-Saharan Africa. Nigeria accounts for twenty-five percent of the world's malaria burden (Aribodor et al., 2016). The authors further stated that in Nigeria, the disease is responsible for about sixty percent of outpatient visits to health facilities, thirty percent of childhood deaths, twenty-five percent of deaths under- one year and eleven percent of maternal deaths. It is, therefore, an endemic disease in Nigeria.

Malaria is a serious and sometimes fatal disease caused by a parasite that infects a certain type of mosquito which feeds on human (Emereonye, 2013). The Federal Ministry of Health (FMOH) (2005) viewed malaria as an illness caused by the bite of an infective female anopheles mosquito which transfer the parasite called plasmodium. Malaria is also defined as

an infectious disease caused by protozoan parasite from the plasmodium family that can be transmitted by the bite of the anopheles mosquito or by a contaminated needle or transfusion (Greco, 2015). World Health Organization (WHO) (2015) defined malaria as a disease caused by a parasite called plasmodium which is transmitted through the bites of infected mosquitoes. Summarily, malaria is a disease caused by a parasite called plasmodium that is transmitted through the bites of infected mosquitoes which could affect pregnant women leading to complications. The clinical symptoms of malaria as observed by WHO (2015) include fever, headache and vomiting which usually occur between 10 through 15 days after mosquito bite. Other symptoms include: sweats, muscle ache, vomiting, diarrhea, coughing and jaundice (which is the yellowish discoloration of the skin and eye). Furthermore, persons with severe Falciparum malaria can develop bleeding problems, shock, central nervous system problems, kidney or liver failure, coma and ultimately death (MMV, 2015). In addition, Desai, Hill, Fernandes, Walker, Pell, Gutman et al. (2018) opined that malaria remains one of the most preventable causes of adverse birth outcomes and the population at highest risk for malaria includes children, the non-immune and pregnant women.

Pregnancy according to Rosecrans (2005) is a period of great physical and emotional changes for women. These changes, the author further stated are partly the result of hormonal fluctuations and partly, the physical strain of carrying extra weight. In addition, Centre for Disease Control(CDC) (2016) opined that the changes in the immune system, heart, and lungs during pregnancy make the pregnant women more prone to severe illnesses and can lead to premature labour and delivery. The author further stated that pregnant women are at high risk of dying from the complications of severe malaria.

The World Health Organisation (indicate the year) Global Malaria Programme (GMP) is responsible for the coordination of the WHO's global effort to control and eliminate malaria. They are focused on providing an integrated solution to the various epidemiological and operational challenges that affects different parts of the world. However, WHO (2020) reported that there was a 29% reduction in global malaria case incidence between 2000 and 2019, but less than a 2% reduction between 2015 and 2019. In the same period (2000–2019), there was a 60% reduction in global malaria mortality incidence, with about a 15% reduction between 2015 and 2019. However, between 2000 and 2019, the population in sub-Saharan Africa (where 94% of global malaria cases and deaths occurred in 2019) grew from 665 million to about 1.1 billion. Hence, Oche et al. (2010) reported that there was a need to create more awareness of the anti-malaria, significance of insecticide treated nets through intensive health education in areas with endemic drug resistant malaria and insufficient health infrastructure for the achievement of set goals. This underscores the need for upscaling the GMP. Roll Back Malaria as one of the GMPs

was the focus of this study. Roll back malaria is an important malaria prevention and control strategy launched by Dr. Grottalem Brundtland in 1998. It is a malaria control programme by the framework for coordinated action against malaria. This programme was launched as a partnership between WHO, United Nations Development Programme (UNDP) and the World Bank, in an effort to provide a coordinated global response to the disease (Emeronye, 2013). Roll Back Malaria aims to generate a dynamic societal movement among those at risk of malaria. It is about encouraging communities at risk to take individual and collective actions to prevent and control malaria, especially in pregnancy. Prevention of malaria involves protecting oneself against mosquito bites and taking anti-malaria drugs (Blouse, 2008). Blouse further stated that malaria infection can be prevented and controlled through adequate nutrition, personal and environmental hygiene, environmental management and larvae control (i.e., through the use of larvicide), indoor residual spraying (IRS) and the use of long-lasting insecticide treated nets (LLINS).

Centre for Disease Control (2016) opined that changes in the immune system, heart, and lungs during pregnancy make the pregnant women more prone to severe malaria illness and can lead to premature labour and delivery. WHO further stated that pregnant women are at high risk of dying from the complications of severe malaria. In addition, Seun-Addie and Nwokocha (2018) asserted that the effects of malaria on maternal health are multifaceted and include increased risk of miscarriage, still birth, premature birth, low birth weight, which is a leading cause of infant and child mortality. Malaria during pregnancy is also implicated in anaemia which could lead to death or permanent neurological malady such as speaking disorder, epilepsy, spasticity, among others. Malaria causes spontaneous abortion and is responsible for about one third of preventable low birth weight babies, especially in African region (Seun-Addie & Nwokocha, 2018). Prevention of malaria in pregnancy controls the impact of and complications of malaria on both the mother and child.

This present study therefore focused on the prevention practices, accessibility and availability of roll back malaria programme of Roll Back malaria programme among pregnant women in Nsukka LGA, Enugu State. Nsukka LGA, Enugu State is situated in Enugu North senatorial zone. It is home to members of the Igbo ethnic group known for their rich indigenous cultural heritage. They are farmers and believe that having many children depicts the strength of their culture and individual abilities. Thus, pregnant women are often present in the community and as identified by WHO, these pregnant women are at high risk of dying from the complications of severe malaria. Malaria prevention among these pregnant women becomes imperative. The benefits of Roll Back Malaria are apparent especially with regards to pregnant women. These benefits include reduction in complications of malaria such as abortion,

premature deliveries, still births, low birth weight babies and severe maternal anemia (WHO, 2013). However, the benefits of Roll Back Malaria may be limited by some barriers.

The major barriers facing Roll Back Malaria in Nigeria, according to WHO (2013) are the huge population, vast geographical area and the gap in funding. It could also be classified as environmental, economical, socio-cultural problems. Roll Back Malaria problems could be perceived, especially in Nsukka LGA as inaccessibility to malaria prevention during ante-natal care, unavailability of malaria treatment and other preventive strategies of malaria infection. Okeibunor et al. (2011) reported that adoption of community directed intervention programmes lead to large and statistically significant increase in effective access to malaria prevention in pregnancy. Also, the National Institute of Allergy and Infectious Diseases (NIAID) (2011) asserted that vector management tools such as insecticides, environmental medications and bed nets have contributed greatly to successful malaria control efforts.

Therefore, the study on the prevention practices, accessibility and availability of roll back malaria programme of Roll Back Malaria programme among pregnant women in Nsukka LGA Enugu state becomes necessary.

Purpose of the Study

The purpose of the study was to examine the prevention practices, accessibility and availability of roll back malaria programme of Roll Back Malaria programme among pregnant women in Nsukka LGA, Enugu State. Specifically, the objectives of the study were to determine the:

1. prevention practices of malaria among pregnant women in Nsukka LGA Enugu State.
2. Accessibility of roll back malaria programme among pregnant women in Nsukka LGA Enugu State.
3. Availability of roll back malaria programme among pregnant women in Nsukka LGA Enugu State.

Research Questions

The following questions have been formulated or designed to guide the study;

1. What is the level of prevention practices of malaria among pregnant women in Nsukka LGA Enugu State.?
2. What is the level of accessibility of roll back malaria programme among pregnant women in Nsukka LGA Enugu State?
3. What is the level of availability of roll back malaria programme among pregnant women in Nsukka LGA Enugu State?

Materials and Methods

The descriptive survey research design was utilized for the study. The study was conducted in Enugu State. The population of the study comprised all the pregnant women and health workers residing within the eight (8) wards in Nsukka LGA, Enugu State. Statistics from thirteen hospitals and clinics visited in Nsukka LGA showed that there are 1715 persons at the various antenatal clinics, of which 1533 were pregnant women and 182 were health workers (Nsukka LGA health unit, 2015). Using Cohen, Manion, and Morrison formula, a sample size of four hundred and fifty (450) pregnant women and health workers in Nsukka LGA, Enugu State were purposively selected for the study.

A researcher-structured instrument was used for data collection. The instrument was made up of two sections, A and B. Section A elicited information about the respondents' biodata while section B was designed to gather information on prevention practices, accessibility and availability of roll back malaria programme. The respondents were required to tick [✓] as it applies to them in all the sections. The instrument was validated by three experts from the Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. The reliability coefficient of 0.76 was established using Cronbach Alpha. Four hundred and fifty copies of the questionnaire were administered and collected on the spot. The returned copies of the questionnaire were examined to ensure the responses to the questions are correctly completed. Those that are not properly filled were discarded. Four hundred and forty-seven (447) copies were completely and correctly filled, making a return rate of 99.3%. The properly completed copies were coded and computed using Statistical Package for Social Sciences version- 21. Data were analyzed on item-by-item basis. Frequencies and percentages were used to answer the research questions. Levels of prevention, accessibility and availability were determined as follows: 0-29% (Very Low), 30-49% (Low), 50-64% (moderate), 65-79% (High) and 80% and above (Very High). Provide an empirical evidence for this benchmark.

Results

The findings of the study are presented in tables according to data answering research questions.

Table 1: Prevention practices of malaria (n=447)

S/N	Items	Yes		No	
		F	%	f	%
1	I sleep under insecticide treated nets especially during pregnancy	379	84.79	68	15.21
2	Leaving doors and windows open without nets encourage mosquito infestation and bites	395	88.37	50	11.19
3	I cut the bushes and maintain regular environmental sanitation around the surroundings to prevent mosquito breeding	416	93.06	29	6.49
4	I take intermittent preventive malaria medicine help prevent malaria.	404	90.38	36	8.05
Average Percentage		89.15		10.24	

Key: f – frequency, % - percentages

Table 1 indicated that 84.79% of the respondents sleep under insecticide treated nets especially during pregnancy help prevent malaria while 15.21% did not. The table showed that 88.37% of the respondents agreed that leaving doors and windows open without nets encourage mosquito infestation and bites while 11.9% did not. The table also showed that 93.1% of the respondents cut the bushes and regularly maintain environmental sanitation around their surroundings to prevent mosquito breeding while 6.49% did not. The table further showed that 90.4% of the respondents took intermittent preventive malaria medicine help prevent malaria while 8.05% did not. Hence, the level of prevention practices of malaria among pregnant women and health workers in Nsukka LGA was very high (89.2%).

Table 2: Accessibility of insecticide treated net(s) (n=447)

S/N	Items	Yes		No	
		F	%	F	%
1	Sleeps under insecticide treated net regularly	280	62.64	167	37.36
2	Good information on the use and care of the insecticide treated net	334	74.72	113	25.28
3	Have adequate number of insecticide treated net in your home	283	63.31	164	36.69
4	Experience difficulties getting insecticide treated net	316	70.69	131	29.31
Average Percentage		67.84		32.16	

Key: f – frequency, % - percentages

Table 2 showed that 62.6% of the respondents slept under insecticide treated net regularly while 37.36% did not. Results showed that 74.7% of the respondents had good information on the use and care of the insecticide treated nets while 25.28% did not. Furthermore 63.3% of the respondents had adequate number of insecticide treated nets while 36.7% of the respondents did not. The table further showed that 70.7% of the respondent experienced difficulties getting insecticide treated nets while 29.31% did not.

Table 3: Availability of Roll Back Malaria Programme/Services (n=447)

S/N	Items	Yes		No	
		f	%	f	%
1	Have received insecticide treated net(s)	329	73.60	118	26.40
2	Difficulty getting free medical treatment for malaria	293	55.55	154	34.45
3	Received free treatment for malaria at the antenatal clinic	295	66.00	152	34.00
Average Percentage		68.38		36.62	

Key: f – frequency, % - percentages

Table 3 showed that 73.6% of the respondents received insecticide treated net(s) while 26.40% did not. Results also showed that 65.6% of the respondents found it difficult getting free medical treatment for malaria while 34.45% did not. The table further showed that 66.0% of the respondents received free treatment for malaria at the ante-natal clinic while 34.0% did not. Roll back malaria programme was moderately available (68.38%) among pregnant women in Nsukka LGA.

Discussion

The findings of the study showed that the level of prevention practices of malaria among the pregnant women and health workers was very high. The findings were expected and therefore not surprising because the findings are in line with the work of Babalola et al. (2013) who reported that there has been more awareness created, and more political commitment towards malaria control evidenced through the tax and tariffs waivers on ACTs, ITNs and insecticide treatment kits. The findings also agree with the work of Okeibunor, Orji, Brieger, IsholaOtolorun, Fink, Rawlins, and Onyeneho (2011) who reported that adoption of community directed intervention programmes lead to large and statistically significant increase in effective access to malaria prevention in pregnancy. Also, the study agreed with that of the NIAID (2011) who reported that vector management tools such as insecticides, environmental medications and bed nets have contributed greatly to successful malaria control efforts.

The findings of the study also showed that accessibility of insecticide treated nets among pregnant women and health workers is moderately high. The finding was expected and therefore not surprising because the findings are in line with Ibor, Aigbe, Iwara, Okongor, and Okino (2012) who reported that utilization of insecticide treated nets among net owning households was

impressive, mostly by the vulnerable groups. However, the findings disagree with Oche, Ameh, Umar, Gana, and Njoku (2010) who reported that there was a need to create more awareness of the anti-malaria, significant of insecticide treated nets through intensive health education in areas with endemic drug resistant malaria and insufficient health infrastructure for the achievement of set goals.

The result of the study further indicated that roll back malaria programme/services are moderately available. The result was anticipated and therefore was not surprising because the findings is in line with the findings of Babalola et al. (2013) who reported that sue of ITNs increases, more awareness created and more political commitment towards malaria control in the country due to the ministerial advocacy visits to states, and that a few recruitment was made in national malaria control programme (NMCP) and capacity building carried out to strengthen malaria programme management. The findings also agree with the work of Fana, AloNaphatali, and Salah (2014) who revealed that an equitable distribution of insecticide treated net among their study population and that there is low prevalence among pregnant women who uses insecticide treated nets, compared to their counterparts that did not use it. The findings however disagree with the work of Sabin, Rizal, Brooks, Singh and Tuchman (2010) who reported that there was less consistent use of bed nets since the markets and shops that sold bed net were far from their homes.

Conclusion

The issue of malaria especially as it relates or affects the pregnant women calls for intensified efforts to eradicating the infection and disease to minimize the effect on pregnancy and child. However, on the basis of the findings the study concluded that prevention practices for malaria among pregnant women in Nsukka is high, insecticide treated nets though available are not adequately accessible to pregnant women and health workers in Nsukka, and Roll back malaria programme is moderately available for pregnant women in Nsukka.

Recommendations

Based on the findings of this study, the researcher recommends that the government should provide more health facilities closer to the people and health workers should ensure that roll back malaria services and preventive measures for malaria infection and diseases are available and accessible especially to pregnant women.

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