

Assessment of Knowledge of Malaria Prevention Strategies among Mothers of Under-Five in Ogun State, Nigeria

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Abstract

*This study employed ex-post facto research design in assessing the knowledge of malaria prevention strategies among mothers of under-five in Ogun State, Nigeria. The population of this study is 641,445 mothers of under-five in Ogun State, Nigeria. A multi-stage sampling approach was used to select 218 mothers of under-five through a stratified random sampling technique, simple random sampling technique and purposive sampling techniques were used for this study. The instrument used for data collection was a structured questionnaire. Two hundred and sixteen (216) validated copies of the instrument were used for data collection. Collected data was analyzed using simple percentage, frequency count, descriptive statistics and one sample t-test analysis at 0.05 alpha level. The results obtained revealed that mothers of under-five children in Ogun state have less knowledge of all the malaria prevention strategies. Based on the findings, it was concluded that mothers of under-five children in Ogun state **have less** knowledge of malaria prevention strategies. It was recommended that seminars/ workshop and community health related programs should be organized by government and non-governmental organization for mothers of under five children on malaria prevention strategies in order for them to know all the strategies that can be used to prevent malaria.*

Keywords: knowledge, malaria preventive strategies, mothers of under-five

Introduction

Malaria presently remains one of the worst menace of tropical countries of the world, it is one of the most severe public health problems worldwide, and a leading cause of death in many developing countries, where under-five children and pregnant women are the groups most affected. According to the World Health Organization (WHO) Malaria Report (2013), 97 countries had ongoing malaria transmission. Out of the 3.4 billion people who are at risk of malaria, an estimated 1.2 billion are said to be at high risk of the disease. In 2012 alone, the

report estimated that approximately 207 million cases and an estimated 627,000 deaths resulted from malaria (WHO, 2013).

Knowledge is the ability to recall or recognize something such as a fact concept, principle or custom (Kalua, 2001). It is further stated that knowledge can be acquired through formal or informal settings either by the help of someone or alone. Knowledge is said to be a source of power necessary for everyone to make informed decisions about one's health and participate actively in promoting health of the community (Kalua, 2001). Mothers play very important role in the prevention of any childhood disease. In malaria endemic areas majority of mothers can identify the disease with fever (Ahorlu, 2007). Understanding people's perceptions of malaria and the factors which influence this perception must be a central part of mounting successful interventions to the control of malaria throughout the world (Ahorlu, 2007). Within Nigeria, surveys of residents of the Atlantic coast revealed a lack of knowledge and many misconceptions about the transmission and treatment of malaria, which could adversely affect malaria control measures and antimalarial therapy (Afolabi, 2006).

Annually, malaria kills more people in the tropics than any other infectious disease. The human and economic costs associated with declining quality of life, consultations, treatments, hospitalizations and other events related to malaria are enormous and often lead to low productivity and lost incomes. Experiences with malaria have shown that prevention is better and cheaper than cure; however the practice of malaria prevention measures has been related to the knowledge and belief of people and have been found to be low and difficult to implement when malaria risk is perceived to be low (Winch et al., 2004).

Ashikeni, Envuladu and Zoakah (2013) that the mothers of children less than five years in Kuje had poor knowledge of the cause of malaria, its prevention and possible complications, good knowledge of the prevention of malaria among mothers such as the use of ITNs, insecticide sprays, nets on windows and doors or protective clothing, was found to be 5.4% at baseline in the intervention group but this increased to 25% at post intervention. This was statistically significant ($p= 0.0002$). In the control group, good knowledge of prevention of malaria increased marginally from 7.7% to 9.7% but this was not statistically significant ($p= 0.369$). It showed that adequate and proper health education to women especially in the language they understood increased their knowledge and improved their practice of the treatment of malaria in children. As found by Amodu, Adepolu, Adeniran, Adeoye, Kassim, Oyewole and Nwuba (2006) in their study, the commonly used individual preventive measures among mothers of under five children were window and door nets, spraying of house with insecticide aerosol and mosquito coil. While the common environmental management measures among them include cutting of grasses around the houses and destroying of the mosquito breeding sites.

In spite of measures taken against malaria, it has continued to rank high among the most prevalent and severe disease in Nigeria. This is linked to the rapid development and sustenance of resistant strains of the parasite. Attempts at different periods by governments and concerned organizations in these regions aimed at control and eradication have not been satisfactory. This perhaps informed the shifts in campaign from eradication to control. There are many activities

and programme that combat malaria in Ogun state, but deadly gaps still exist. More need to be done to prevent mothers and their children from being infected and ensure access to qualitative malaria treatment. Mothers, families and communities need to be empowered to participate and improve their knowledge, attitude and practices on how to recognize and prevent malaria through governmental and non-governmental organizations (Lokomba, 2012).

Statement of the Problems

Malaria presently remains one of the worst menace of tropical countries of the world. It is a killer and debilitating disease that affects the physical and economic well-being of people living in endemic areas of Africa. The high intensity of the spread of malaria makes it an enormous public health problem. African countries are most hard hit by the disease, where it ravages communities. In most parts of Nigeria, malaria is a preventable and curable disease that is highly endemic, where the vast majority of cases occur in children under the age of five, due to this, mother of under-five children need to be more empower concerning MKAP. Malaria prevention strategies have been implemented in the recent past and intensified as an effort to attain the World Health Assembly, Roll Back Malaria, and Millennium Development universal targets with the aim of reducing and interrupting disease transmission in Nigeria. Ogun state is one of malaria endemic area in Nigeria, in which malaria prevention strategies such as the use of Insecticide Treated bed Nets (ITNs), Indoor Residual Spraying of insecticide (IRS), use of repellent, use of door net, use of window net, electric mosquito zapper and health education on knowledge, attitudes and practices for the high risk population especially the under-five children have been implemented by the government and non-governmental organization. Despite of all these efforts, the overall prevalence of malaria infection remains high among the under-five children. This reveal that mothers of under-five children still lack the Knowledge, Attitude and Practice (KAP) of malaria prevention strategies in Ogun State. The questions are what did mother of under five children know about malaria prevention strategies? Did mothers of under five children know all the strategies used in preventing malaria?

Purpose of the Study

The purpose of this study is to assess knowledge of malaria prevention strategies among mothers of under-five children in Ogun State, Nigeria.

Research Question

1. Do mothers of under-five children have knowledge of malaria prevention strategies in Ogun State?

Null Hypothesis

1. Mothers of under-five children in Ogun state do not have significant knowledge of malaria prevention strategies.

Methodology

Ex-post facto research design was used for this study. The population of this study is 641,445 mothers of under-five in Ogun State, Nigeria. A multi-stage sampling approach was used to select 218 mothers of under-five from the population through a stratified random sampling technique, simple random sampling technique and purposive sampling techniques. The instrument used for data collection was a structured questionnaire. Two hundred and sixteen (216) validated copies of the instrument were used for data collection. Collected data was analyzed using simple percentage, frequency count, descriptive statistics, one sample t-test analysis and Pearson product Moment Correlation Co-efficient at 0.05 alpha level.

The first stage involved the use of stratified random sampling technique where the general hospitals in Ogun State were stratified into the three (3) senatorial districts which are Ogun West, Ogun Central and Ogun East. The second stage involved the use of simple random sampling technique to select one general hospital from each senatorial district by writing the names of all the general hospital in each senatorial district on a piece of paper, roll and placed in a container, shuffled, and the selection was made. The third stage involved the use of purposive sample techniques to select the respondents (mothers of under-five) attending each general hospital at the pediatric unit.

The instrument that was used in conducting this research was a structured questionnaire. In order to establish the validity of the instrument, the questionnaire was vetted by three (3) experts in the Department of Physical and Health Education, Faculty of Education, Ahmadu Bello University, Zaria for comments, observations, correction and suggestions. After incorporating all the suggestions made by the experts, final questionnaire was prepared for gathering information for the study. With the use of Statistical Package for Social Science (SPSS) version 17, one sample t-test and Pearson Product Moment Correlation Coefficients were used to analyze the data.

Results

Research Question One: Do mothers of under-five children have knowledge of malaria prevention strategies in Ogun State?

Table 1: Mean scores of the Responses on the Knowledge of Malaria Prevention Strategies among Mothers of under five Children

Knowledge of Malaria Prevention Strategies	Mean	Std. Dev.
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I know that the use of mosquito coil can prevent mosquito from biting my child	3.48	0.58
I know that insect repellent use can prevent mosquito from biting my child	2.10	0.55
I know that mosquito net when used can help to prevent mosquitoes from biting my child	2.69	1.59
I know that window net when fixed can help to prevent mosquitoes from biting my child	3.17	1.40
I know that door nets when fixed can help to prevent mosquitoes from biting my child	2.99	.98
I know that cutting bushes around the house can help to prevent mosquitoes breeding	2.02	.87
I know that disposing of empty containers harboring water can help to prevent breeding of mosquitoes	2.15	1.20
Use of electric mosquito zapper can help to prevent mosquitoes from biting my child	2.83	.95
Putting on protective cloths (long pants and long sleeve shirt) for children will help to prevent mosquito bites	1.06	.43
Indoor residual spraying of insecticide can completely prevent mosquitoes from staying corners of the rooms	2.64	1.05
Aggregate Mean	2.41	

Table 1 shows the mean score of the responses on the knowledge of malaria prevention strategies among mothers of under five children. The aggregate mean score of the items is 2.41 which was found to be less than benchmark score of 2.5. This implies that mothers of under five children had less knowledge of malaria prevention strategies in Ogun state.

Hypothesis one: Mothers of under-five children in Ogun state do not have significant knowledge of malaria prevention strategies.

Table 2: One sample t-test analysis of mothers of under-five children in Ogun State towards knowledge of malaria prevention strategies.

Variable	Mean	Std.	df	t-value	P-value.
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Aggregate Mean	2.41	0.96	215	1.16	0.093
Constant Mean	2.500	0.00			

$t(215) = 1.960 > 1.16 @ 0.05$

The result showed the t value of 1.16 at 215 degree of freedom (df) and a significance level of 0.093 ($p > 0.05$) with this observation the null hypothesis is retained, that mothers of under-five children in Ogun state do not have significant knowledge of malaria prevention strategies.

Discussions

The results of this study revealed that generally mothers of under-five children in Ogun state were less knowledgeable about malaria prevention strategies. This study agreed with the study of Ashikeni, Envuladu and Zoakah (2013) that the mothers of children less than five years in Kuje had poor knowledge of the cause of malaria, its prevention and possible complications. It showed that adequate and proper health education to women especially in the language they understood increased their knowledge and improved their practice of the treatment of malaria in children. As found by Amodu, Adepolu, Adeniran, Adeoye, Kassim, Oyewole and Nwuba (2006) in their study, the commonly used individual preventive measures among mothers of under five children were window and door nets, spraying of house with insecticide aerosol and mosquito coil. While the common environmental management measures among them include cutting of grasses around the houses and destroying of the mosquito breeding sites. This study however discovered that mothers of under-five have knowledge of mosquito net and insecticide as preventive strategies against malaria but they don't have knowledge of other strategies.

Conclusion

Based on the findings, conclusion were drawn that mothers of under-five children in Ogun state have less knowledge of malaria prevention strategies.

Recommendation

On the basis of the conclusion drawn, the recommendations were made that; Seminars/ workshop and community health related programs should be organized by government and non-governmental organization for mothers of under five children on malaria prevention strategies in order for them to know more strategies that can be used to prevent malaria.

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