

ASSESSING THE ADOPTION OF ROLL BACK MALARIA PROGRAMME (RBMP) AMONG WOMEN FARMERS IN IKORODU LOCAL GOVERNMENT AREA OF LAGOS STATE

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ABSTRACT

Combating malaria globally, especially among women and infants, has become a public health, environmental and economic priority, as such special focus has been given to it in the millennium development goal. This has also led to the initiation of programmes such as the Roll Back Malaria Programme (RBMP). In view of this, this paper assessed the adoption of RBMP among women in Ikorodu local government area of Lagos state. Data were obtained from 150 women farmers who were purposively selected. The data gathered were analyzed using descriptive and logit regression analysis. About 62% of the respondents were between 31 and 50 years of age and 52% had more than 6 persons in their household, 60% had at least secondary education, 74% earned less than ₦20, 000 (122.6 USD) per month, 72% were full-time farmers, 82% had access to Primary Health Care (PHC), 55% were aware of the RBMP but only 46% have adopted the use of Insecticide-Treated Net (ITN). Furthermore, respondents' awareness of RBMP, income level, educational status, membership of cooperative association, frequency of malaria attack and patronage of the PHC centres positively influenced their adoption of RBMP and consequent use of ITN while age had negative influence on adoption of RBMP among respondents. To accelerate adoption of RBMP, there is yet the need to focus policy on collaborative efforts of health personnel, cooperatives, media houses and government agency in fashioning out awareness programmes that incorporate socio-economic characteristics of the audience especially at the local government level.

Keywords: Roll back malaria programme, insecticide treated net, logit regression, Ikorodu.

INTRODUCTION

Among the major diseases that are common in Africa, malaria is one of the greatest threats facing development in Africa today. It attacks an individual on an average of four times in a year with an average of 10 to 14 days of incapacitation (Alaba and Alaba, 2003). Studies have shown that about 350 to 500 million clinical disease episodes occur annually (Bawah and Binka, 2005). Over 75 percent of these mortality figures (especially children) are from African (MIM, 2001; Alaba, 2005). This statistics has serious implication for economic growth and welfare. The worry is even compounded by the fact that the disease is growing resistant to the cheap anti-malaria drugs and the poor households cannot afford the more expensive ACT combination therapy.

In Nigeria, malaria is the major cause of morbidity and mortality, especially among pregnant women and children below age five (Alaba, 2007). Malaria is a social and economic problem. The economic loss due to malaria in Nigeria is in excess of two million US dollars per year (WHO, 2005). Malaria is not only a health problem, it is also an economic problem. Malaria at the household level affects the productivity of the people and their assets

acquisition capacity. Households also frequently spend substantial share of their income and time on malaria prevention and treatment as well as an effort to control mosquitoes (Coluzzi, 1999).

Because Malaria control is such a complex issue, its stakeholders are varied and therefore it requires well-coordinated international collaboration. The Roll Back Malaria (RBM) Partnership and Millennium Development Goals (MDG), which was launched in 1998 by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP) and the World Bank, is one of this international collaboration that is aimed at achieving 80% use of insecticide treated net (ITN) among pregnant women and children below five years of age in Africa, especially in rural and semi-urban areas (WHO, 2008). Broadly speaking, the goal of the RBM programme is to half the malaria burden through interventions that are adapted to local needs via case management using Artemisinin-based combination therapies, Insecticide - Treated Net (ITN) and other vector control measures, providing malaria treatment and Intermittent Preventive Therapy (IPT) for pregnant women and improving malaria epidemic preparedness and

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responses. These activities were to be facilitated by integration of malaria control activities in Primary Health Care (PHC) and other social activities and strengthening health information systems and research so as to strengthen community participation (FMOH, 2000; WHO, 2008; Salaudeen and Jimoh, 2009). Despite this laudable global effort at ameliorating the malaria menace, rural Africa still suffer gravely from malaria.

Rural and semi-urban Nigeria is largely agrarian, thus, the effects of malaria on agriculture, health, and development are widespread (Babalola *et al.*, 2009). Women perform nearly all the tasks associated with farming and food marketing in Nigeria as well as most part of Africa (Todaro, 2000; FAO, 2010). It is against this backdrop that this study examined the factors influencing the adoption of the RBM programme among women farmers in Ikorodu local government area of Lagos state.

Malaria: the micro-macro linkage

Malaria has implications for the development of household members and the country through various mechanisms. One, malaria impairs the ability of people to work hard by losing productive time during care-giving activities, while adults with malaria severely compromise household/family resources, as their capacity to work, earn income and save for their families is reduced (WHO, 2000). Added to this, the illness generates new financial demands to cover medical treatment, threatening food supply and in extreme cases funeral expenses. Two, it affects child's development and compromise future productive capacity due to absenteeism from school associated with malaria attack. Also, malaria is known to be a main cause of anaemia, epileptic convulsions, growth faltering, and neurological sequelae. These are all likely to affect children's performance at school. Three, in the agricultural sector or rural area, peak of malaria transmission has been found to coincide with the peak of planting and harvesting seasons when demand for labour is supposed to be highest. Thus, vast expanse of land goes uncultivated and substantial harvest are lost because workers are sick.

Current trends in malaria prevention

Progress, although limited, can be observed in malaria prevention and cure in Nigeria since 2000. The report of the Federal Ministry of Health (FMOH, 2005) identified the following progress over the period 2006-2010:

- The change and adoption of a new treatment policy from Chloroquine to Artemisinin based Combination Therapy (ACT) has been made.
- In spite of the inadequate human resources, a few recruitment was made in the National Malaria Control Programme (NMCP) and capacity building carried out to strengthen malaria programme management.

- Use of ITNs has increased from about 2.2% (2003) to about 6.8% (2005). This has provided a firm base for planned scaling up efforts.
- The malaria control programme has benefited from the strengthening of partners both in the public and private sectors.
- There has been more awareness created and more political commitment towards malaria control in the Country due to the Ministerial advocacy visits to States. This is also evidenced through the tax and tariffs waivers on ACTs, ITNS and insecticide treatment kits.

However, the FMOH report further revealed that a number factors still poses challenges (in form of weaknesses and threats) to the achievement of the success of malaria prevention programmes in Nigeria which include:

- Lack of knowledge on the interaction of the package of interventions and outcomes.
- A weak and constrained health system that may not cope with added pressures of a national programme expansion.
- Inadequate funding for effective programme management.
- Procurement and supply chain system that is in its infancy stages.
- Human resource gaps especially at sub-national level.
- Gaps in total required resources for meeting scaling up targets
- Low priority for malaria control by some policy makers at sub-national level

MATERIALS AND METHODS

The study was carried out in Ikenne Local Government Area of Ogun State. The Local Government is made up of five major towns viz: Ikenne, Ilishan, Irolu, Iperu and Ogere. The people of the local government engage in the planting of different food crops like maize, cassava, pineapples, various types of vegetables, e.t.c. They also engage in livestock rearing and trading. The climate is hot and humid which favours the proliferation of the mosquito vector. The vegetation and climate of Ikenne places it in the malaria belt (Babalola and Agbola, 2009).

Primary data were collected from 100 rural women farmers in the study area using purposive sampling procedure. The information collected from farmers (such as socio-economic, institutional, farm level etc) was based on one year production activities.

The logit regression model was employed to examine the factors that influence the respondents' adoption or non-adopting of the Roll Back Malaria programme. For the

purpose of this study, the use of ITN is conceived to reflect the adoption of RBMP. The model is specified as follows:

$$\ln(P_i/(1-P_i)) = \beta_0 + \beta_1 X_1 + \dots + \beta_{14} X_{14} + e_i \quad (\text{Gujarati 1998})$$

Where

The dependent variables are the natural log of the probability of adoption of RBM programme (P_i) divided by the probability of not adopting ($1-P_i$), β_0 = the intercept, $\beta_{1...14}$ = regression coefficients, $X_{1...14}$ = independent variables, and e_i = error term.

The independent variables specified are factors affecting the adoption of RBM programme, and are defined below:

- X_1 = Age (years)
- X_2 = Income level per production season (₦)
- X_3 = Educational status (years)
- X_4 = Farming experience (years)
- X_5 = Farm size (ha)
- X_6 = Household size
- X_7 = Extension services (Yes=1, No=0)
- X_8 = Awareness of RBMP (Yes=1, No=0)
- X_9 = Community Based Organization (CBO)/ Cooperative membership (Yes=1, No=0)
- X_{10} = Frequencies of malaria attack per year
- X_{11} = Cost of malaria treatment per year (₦)
- X_{12} = Presence of vulnerable group (i.e. pregnant women and children under the age of five).
- X_{13} = Patronage of Primary Health Care (PHC) centre when sick (Yes=1, No=0)
- X_{14} = Number of days off farm as a result of malaria attack per month

RESULTS AND DISCUSSION

Descriptive statistics of the respondents

Results according to table 1 showed that the majority (46%) of the women interviewed were between 31 and 40 years old and 64 percent were married meaning that the majority of the respondents are still in their reproductive age, thus, the Roll-Back-Malaria programme (RBMP) is very relevant in the study area. Most of the respondents (60%) had at least secondary education. Most of the women (55%) claimed to be aware of the RBMP especially through the mass media (20%) followed by health centres (16%) and Community Based Organizations (13%) (CBO), however, 45 percent of the respondents were not aware of the RBMP. The nexus between respondents' educational level and awareness of the RBMP on adoption of the program is consistent with documented literature (Babalola *et al.*, 2012). Monthly income for the majority (74%) of the respondents' households was less than ₦20,000 (US \$ 122.6), with

more than six members constituting the size for most (52%) households, a lot of the respondents live below a dollar a day, indicating presence of poverty in the study area. The majority (72%) of the respondents were full-time farmers and had access (82%) to Public Health Care (PHC). The use of mosquito repellent as a control measure for the prevention of malaria was mostly favoured by most of the households (26%) in the study area. The majority of the households interviewed (59%) had at least one pregnant woman, infant or both as members of the household.

Factors influencing the adoption of the RBMP

The regression result as presented in table 2 showed that out of all independent (explanatory) variables, the coefficient of educational level of the respondent ($p < 0.1$), income level ($p < 0.05$), awareness of the RBMP ($p < 0.1$), frequency of malaria attack ($p < 0.05$), and patronage of the PHC centre when sick ($p < 0.1$) were significant with a positive sign, indicating a direct relationship between these factors and the adoption of RBMP. This implies that increase in these independent variables would increase the probability of the respondents' adoption of RBMP. The coefficient for the age of the respondents ($p < 0.1$) was significant with a negative sign showing an inverse relationship between age and the probability of the adoption of RBMP. This implies that older women show less interest in the RBMP.

CONCLUSION AND RECOMMENDATIONS

This study assessed the adoption of Roll-Back-Malaria Programme (RBMP) among women farmers in Ikorodu Local Government Area of Lagos state. The findings demonstrated the importance of education, and awareness efforts to the adoption of RBMP. The nexus between income level, an important precursor of poverty status, and adoption of RBMP, was also established. The study also shows the impact the Public Health Care (PHC) delivery centres can have on the adoption of RBMP.

Based on the findings in this study, the following are being recommended:

1. Awareness campaign as regards the health and economic advantages of malaria prevention should be intensified especially via the mass media.
2. To accelerate adoption of RBMP, there is yet the need to focus policy on collaborative efforts of health personnel, cooperatives, media houses and government agency in fashioning out awareness programmes that incorporate socio-economic characteristics of the audience especially at the local government level. Finally,
3. There is need to intensify the focus on creating demand for Insecticide Treated Nets through all available health information channels.

Table 1. Basic Descriptive Statistics of Farmers' Specific Characteristics.

Variables	No. of Respondents (n= 150)	%
Education (years)		
None	27	18
Primary	33	22
Secondary	59	39
Post primary	31	21
Family Size		
< 3	8	5
4- 6	64	43
> 6	78	52
Farm Size		
< 1	48	32
1- 3	63	42
> 3	39	26
Age (years)		
< 30	45	30
31- 40	69	46
41- 50	24	16
> 50	12	8
Household monthly income (₦'000) @ 1USD = ₦ 163.13		
< 20	111	74
21- 50	27	18
51- 100	12	8
Employment Status		
Full-time farmers	108	72
Farming + clerical	15	10
Farming + artisan	27	18
Access to PHC (dummy)		
1: Yes	123	82
0: No	27	18
Awareness of RBMP (dummy)		
1: Yes	82	55
0: No	68	45
Main source of awareness		
CBO/Co-op	20	13
Mass media	30	20
Family/friend	9	6
Health centre	24	16
None (not aware)	68	45
Main method adopted for preventing malaria		
ITN	30	20
Drugs	32	21
Repellant	39	26
Herbs	27	18
Environ. Sanitation	16	11
None	6	4
Marital Status		
Married	96	64
Single	54	36
Membership of CBO/Co-op (dummy)		
1: Yes	95	63
0: No	55	37
Risk Group in the Household (i.e infant and/or pregnant woman)		
1: Present	89	59
0: Absent	61	41

Source: Field Survey, 2012

Table 2. Regression result for adoption of RBM program.

Independent variables	Beta coefficient	t-ratio
Constant	-.353	2.957
Age	-0.091*	1.856
Household size	0.425	1.335
Farm size	-0.598	0.714
Educational status	0.130*	1.908
Farming experience	-0.024	0.222
Income level	0.067**	2.220
Awareness of RBM	0.382*	1.871
Vulnerable groups	1.045	1.064
Frequency of attack	0.394**	2.297
CBO membership	0.010	0.955
Extension education	0.101	1.003
Patronage of PHC centre when sick	1.626*	1.887
Numbers of days off farm	-0.118	0.259

*Significant at 10% level **significant at 5% level; Pseudo $R^2 = 0.740$; Log likelihood = -46.510**

Source: Computer from field survey data (2012).

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