



Awareness And Utilization Of Long Lasting Insecticide Treated Mosquito Net Among Inhabitants Of Port Harcourt Local Government Area Of Rivers State

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ABSTRACT

Malaria illness has been a major cause of mortality in the tropics and long lasting insecticide treated bednet has been shown to offer some personal protection to users. The aim of this study was to investigate the awareness and utilization of long lasting insecticide treated mosquito net among inhabitants of Port Harcourt Local Government Area in Rivers State. A descriptive survey design was adopted for the study. The population of the study comprised of all the individuals in Port Harcourt Local Government Area. A sample size of 400 was selected using multistage sampling technique. The instrument for the study was a standardized questionnaire with a reliability coefficient of 0.78. Data analysis was done with SPSS using some statistical tool such as frequency count and percentage. The findings of the study revealed that awareness about long lasting treated mosquito net was high as majority 371(92.8%) of the respondents indicated that they have heard about it. More than half (61.8%) of the respondents utilize long lasting insecticide mosquito treated net. Among the respondents who utilize the LLITN, more 148(53.4%) use it always, 117(42.2%) use sometimes while 12(4.3%) rarely use it and 247(61.8%) had the net hung and ready for use. It was concluded that awareness about LLITN was high and the level of utilization of LLITN among inhabitants of Port Harcourt Local Government Area was good. It was recommended that, healthcare professionals should not relent in their effort to raise the awareness about the use of LLITN in the different clinics and health facilities.

Keywords: Mosquito net, Utilization, Awareness, malaria

INTRODUCTION

The use of long lasting insecticide treated mosquito nets is one of the strategies of the Roll Back Malaria initiative and it is a form of vector control measure but, there exists inharmoniousness between awareness and utilization of insecticide treated nets in Nigeria. Malaria is an infestation of parasite, which affects all categories of people. Malaria is a leading cause of morbidity and mortality worldwide especially among pregnant and young children particularly in tropical Africa where at least 90% of malaria death occurs (United Nations International Children's Emergency Fund (UNICEF), 2015). The World Health Organization (2016) report showed that, more than three quarter of global malaria deaths occurs in under five (5) years old children living in malarious countries in sub-Sahara Africa where 25% of all childhood mortality below the age of time is not exempted. The burden of malaria remains a challenge despite the existence of effective technologies and measures for its prevention and control.

In the control of malaria in recent times, Giming (2011) noted that, one of the most effective tools for malaria prevention is the use of long lasting insecticide treated mosquito net (LLITMN), the consistent use of long lasting mosquito treated net can reduce malaria transmission by up to 90% and as much as 44% of mortality among children under five. In the same vein, Lengeler (2017) stated that, with the used of long lasting insecticide treated mosquito net, an overall reduction in child mortality of 17% could be demonstrated with six lives saved per every, 1000 children protected. There is also evidence that if more than 80% of inhabitants in an area sleep under long lasting insecticide treated mosquito net, malaria transmission will be significantly reduced, which cannot benefit people who do not used long lasting insecticide mosquito net themselves (Centre for Disease Control, 2008). A simple mosquito treated net with an insecticide is a proven and cost effective way to repel or kill mosquito carrying the parasite that cause malaria.

The 2008 Nigeria Demographic and health survey result indicated that, 17% of inhabitants in Nigeria own a mosquito net treated or untreated and 8 percentage of inhabitants own more than one mosquito net. Awareness is the ability to perceive or to be conscious of an even, object, thought, emotion or sensory patterns. In this level of consciousness, sense data can be confirmed by an observer, without necessarily implying understanding more broadly, it is the state or quality of being aware of something. Before anything say health facility or long lasting insecticide mosquito treated net is utilized the community must be aware of it. Also to stop the occurrences of malaria people must be aware of what malaria is. Therefore, this study was aimed at investigating the awareness and utilization of long lasting insecticide treated mosquito net among inhabitants of Port Harcourt Local Government Area (PHALGA).

Research questions

Four research questions were stated to guide the study. They are:

1. What is the level of awareness of long lasting insecticide mosquito treated net among inhabitants in Port Harcourt Port Harcourt Local Government Area Rivers State?
2. What is the level of utilization of long lasting insecticide mosquito treated net among inhabitants in Port Harcourt Port Harcourt Local Government Area Rivers State?
3. What is the relationship between educational status and awareness of long lasting insecticide mosquito treated net (LLITMN) among inhabitants of Port Harcourt Local Government Area of Rivers State?
4. What is the relationship between educational status and utilization of long lasting insecticide mosquito treated net (LLITMN) among inhabitants of Port Harcourt Local Government Area of Rivers State?

Hypotheses

Two hypotheses postulated were tested at 0.05 alpha level:

1. There is no significant relationship between educational status and awareness of LLITMN.
2. There is no significant relationship between educational status and utilization of LLITMN.

METHODOLOGY

The descriptive research design was used for this study. In descriptive design, events are observed and described just the way they are without manipulation. This study investigated the awareness and utilization of long lasting insecticide mosquito treated nets for malaria in the inhabitant of Port Harcourt local government area in its natural setting. The population for this study comprise of all the 541,115 inhabitants of Port Harcourt Local Government Area (National Population Commission, 2006). A sample size of 400 respondents was used for this study. This sample size was determined using Taro-Yamen formula. The multistage sampling procedure was used to select the sample. Instrument for data collection was a structured questionnaire titled awareness and utilization of long last insecticide treated mosquito net (LLITMN) for malaria, with a reliability coefficient of 0.78. Data collected were analysed using the statistical package for social sciences (SPSS) version 20.0. Statistical tools such as frequency count and percentage were used for relevant data.

RESULTS

Table 1: Awareness of long lasting insecticide treated mosquito net among respondents

Items	Yes F(%)	No F(%)
Ever heard about LLITN	371(92.8)	29(7.3)
Sources of Information		
Radio	302(75.5)	98(24.5)
Television	243(60.8)	157(39.2)
Friends	296(74.0)	104(26.0)
Internet	144(36.0)	256(64.0)
Doctor/Nurses	278(69.5)	122(30.5)
Newspaper/Magazine	102(25.5)	298(74.5)
Health club	88(22.0)	312(78.0)
LLITN is a bed net treated with insecticide for the purpose of killing and repelling mosquitoes	383(95.8)	5(1.3)
LLITN protect against mosquito bite	390(97.5)	10(2.5)
LLITN protect against malaria if used consistently	373(93.3)	21(5.3)
LLITN protect against other insect bite	374(93.5)	36(6.5)

Table 1 show the level of awareness of LLITN among the respondents. The result shows that majority 371(92.8%) of the respondents have heard about LLITN showing that the level of awareness of LLITN was high. The top on the sources of information was radio 302(75.5%) followed by friend 296(74.0%), doctor/nurses 278(69.5%), television 243(60.8%), internet 144(36.0%), newspaper/magazine 102(25.5%), and health club 88(22.0%). 383(95.8%) were aware that LLITN is a bed net treated with insecticide for the purpose of killing and repelling mosquitoes. 390(97.5%) were aware that LLITN protect against mosquito bite.

Table 4.3: Utilization of long lasting insecticide mosquito treated net among respondents

Items	Frequency (F)	Percentage (%)
Have a long lasting insecticide treated net		
Yes	277	69.2
No	123	30.8
Total	400	100.0
Net hung and ready for use		
Yes	247	61.8
No	30	38.2
Total	277	100.0
Sleeps under long lasting insecticide treated net		
Yes	247	61.8
No	30	38.2
Total	277	100.0
How often respondents sleep under net		
Always	148	53.4
Sometimes	117	42.2
Rarely	12	4.3
Total	277	100.0
Reasons for not sleeping under the net		
Unpleasant odour	46	31.5
Reactions to the chemical	36	24.7
It is expensive	12	8.2
No mosquito net at home	47	32.2
It produces heat	5	3.4
Total	146	100.0

Table 4.3 reveal the level of utilization of long lasting insecticide mosquito treated net among respondents. 277(69.2%) have a long lasting insecticide treated net. 247(61.8%) each had the net hung and sleep under the net. Among the 61.8% of the respondents who utilize the LLITN, more 148(53.4%) use it always, 117(42.2%) use sometimes while 12(4.3%) rarely use it. However, the reasons for not sleeping under the net as given by the respondents include: unpleasant odour 46(31.5%), reactions to the chemical 36(24.7%), it is expensive 12(8.2%), no mosquito net at home 47(32.2%) and it produces heat 5(3.4%).

Table 3: Binary Logistic Regression analysis showing relationship between educational status and awareness of LLITMN

Educational status	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR	
							Lower	Upper
None	Ref		23.710	3	.000			
Primary	-20.42	9473.5	.000	1	.998	.000	.000	.
Secondary	-1.971	.557	12.541	1	.000	.139	.047	.415
Tertiary	-2.195	.469	21.874	1	.000	.111	.044	.279
Constant	-.780	.364	4.591	1	.032	.458		

Table 3 revealed the binary logistic regression showing the relationship between educational status and awareness of LLITMN. The result of the study showed that as educational status increases awareness of LLITMN decreases (B = -2.195; B = -1.971). The result of the study shows a significant relationship between educational status and awareness of LLITMN (p<0.05). Therefore the null hypothesis which states that there is no significant relationship between educational status and awareness of LLITMN is rejected.

Table 4: Binary Logistic Regression analysis showing relationship between educational status and utilization of LLITMN

Educational status	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR	
							Lower	Upper
None	Ref		11.391	3	.010			
Primary	1.260	.380	10.980	1	.001	3.525	1.673	7.426
Secondary	.084	.517	.026	1	.871	.920	.334	2.535
Tertiary	.034	.247	.019	1	.891	1.034	.637	1.680
Constant	-.609	.133	20.920	1	.000	.544		

Table 4 revealed the binary logistic regression showing the relationship between educational status and utilization of LLITMN. The result of the study showed that as educational status increases utilization of LLITMN also increases (B = 1.260; B = .084; B = .034). The result of the study shows a significant relationship between educational status and utilization of LLITMN (p<0.05). Therefore the null hypothesis which states that there is no significant relationship between educational status and utilization of LLITMN is rejected.

DISCUSSION OF FINDINGS

The findings of this study revealed that the level of awareness about long lasting treated mosquito net was high as majority 371(92.8%) of the respondents indicated that they have heard about it. This finding might be due to the fact that in response to the upsurge of malaria outbreak in Nigeria, both governmental and non-governmental agencies have been actively involved in disseminating information about the prevention and control of malaria of which one of such prominent information given was the recommendation of long lasting insecticide treated net. This might be responsible for the high level of awareness about long lasting insecticide treated net found in this study. The findings of this study is in keeping with that of Nwana (2011) which showed that there is a widespread awareness about long lasting insecticide treated. The similarity found between the two studies is not surprising because, there is some expectation that the extensive campaign on the prevention of malaria tagged, roll back malaria campaign

in Nigeria has contributed immensely to the high level of awareness on long lasting insecticide mosquito treated net found in the study area.

The findings of this study revealed that more than half (61.8%) of the respondents utilize long lasting insecticide mosquito treated net. Among the respondents who utilize the LLITN, more 148(53.4%) use it always, 117(42.2%) use sometimes while 12(4.3%) rarely use it and 247(61.8%) had the net hung and ready for use. The findings of this study gives credence to that of Tomass et al. (2012) where the use of insecticide treated nets was encouraged by the authors. The findings of this study is also in line with that of the World Health Organization (2011) where the use of long lasting insecticide treated net was recommended for the prevention of mosquito bite thereby preventing malaria in the populace. The level of utilization of long lasting insecticide treated net found in this study is good considering that there are several other control measures for malaria among which the use of insecticide treated net is included. However, it can be deduced from this finding that the high level of awareness found among the respondents was translated to practice leading to the subsequent good level of utilization.

The findings of this study also revealed that the reasons for not utilizing long lasting insecticide treated mosquito net as given by the respondents include: unpleasant odour 46(31.5%), reactions to the chemical 36(24.7%), it is expensive 12(8.2%), no mosquito net at home 47(32.2%) and it produces heat 5(3.4%). This finding is in keeping with what Tambo et al (2012) observed as part of the barriers to malaria control. More worrisome is the fact that, despite the huge resources committed to the eradication of malaria by organizations and economics of the world, malaria still poses a great challenge to human lives. This is due to the numerous barriers such as the increasing insecticide resistance, local cultural contexts in which those at risk of malaria live and civil unrest (Mwanzo et al., 2009). Despite the fact that the government puts in place control measures such as the free distribution of insecticide treated nets, these nets are not readily and adequately distributed to the citizenry. This stands as a barrier to its eradication in some parts of the society.

The findings of this study showed that there is a relationship between utilization of long lasting insecticide treated net and demographic factor such as educational status. The findings of this study is also similar to that of Elmossad et al. (2016) which showed that demographic factors are related to the utilization of long lasting insecticide treated mosquito net. However, observations, both in this study and by other researchers, points to the fact that for the use of long lasting insecticide treated mosquito net as a control measure for the malaria to be completely implemented, more is still expected to be done by individuals, organizations and governments.

CONCLUSION

Based on the data and the findings, it was concluded that awareness about LLITN was high and the level of utilization of LLITN was good.

RECOMMENDATIONS

Based on the findings of this study the following recommendations were made:

1. The healthcare professionals should not relent in their effort to raise the awareness about the use of LLITN in the different clinics and health facilities.
2. Government in collaboration with the health agencies should ensure that insecticide treated nets are evenly distributed in the different parts of the country.

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