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Level of Awareness and Knowledge of Pregnant Women and Nursing Mothers on Roll Back Malaria Campaign in Lagos State Nigeria

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ABSTRACT

This survey determined the level of awareness and knowledge of pregnant women and nursing mothers on Roll Back Malaria Campaign in Lagos State, Nigeria. Two research hypotheses were formulated. The study adopted public and private hospitals, maternity homes, health centres, and traditional birth attendants in the selected local governments in Lagos State. The data from all the respondents were analysed quantitatively. The analysis involved both descriptive and analytical approaches. The descriptive analysis was conducted on the responses of the questionnaires collected with the use of tabular representation showing frequency, percentages, means, and standard deviations. The study revealed that with the high level of literacy, the level of awareness and knowledge were not influenced by education, the dominant mass media was radio and television and the common misconceptions of the causes and prevention tools of malaria have been corrected by relevant Roll Back Malaria Campaign strategies. Finally, the study concludes that awareness and knowledge of pregnant women and nursing mothers were highly significant, indicating that the Roll Back Malaria Campaign has been effective.

Keywords: *Roll Back Malaria Campaign, pregnant women, nursing mothers*

INTRODUCTION

Malaria still poses a major health challenge to the country and is a major cause of death in children under the age of five. It remains a major public health concern in Nigeria with about 76 percent of the population at risk. The emphasis of the Roll Back Malaria Campaign is the development of better tools for prevention and control which is aimed at reducing what

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WHO referred to as the "massive toll of malaria deaths in Africa, but it is global in its scope and recognises the burden malaria imposes on endemic regions throughout the world. Communication refers to the transmission or exchange of information and implies the sharing of meaning among those who are communicating. It serves the purposes of, initiating actions, making known needs and requirements, exchanging information, ideas, attitudes and beliefs, engendering understanding, and/or establishing and maintaining relations (U.S. Office of Disease Prevention and Health Promotion, 2004).

Public communication campaigns can be defined as purposive attempts to inform or influence behaviours in large audiences within a specified period using an organized set of communication activities and featuring an array of mediated messages in multiple channels generally to produce non-commercial benefits to individuals and society (Rice & Atkin, 2013). Public communications campaigns impart ideas for a strategic purpose. They are an attempt to shape behaviour toward desirable social outcomes.

> *Campaigns maximize their chances of success through the coordination of media efforts with a mix of other interpersonal and community-based communication channels. It also involves a conventional mix of brochures, posters, advertisements, and commercials or a different array of communication methods to achieve certain objectives. Communications campaigns use a variety of techniques and strategies in hopes of improving individual lives and making the world a better place* (Rasha 2014, p.3).

Most campaigns aim at individual behaviour change. There are two main types of campaigns which include; individual behaviour change campaigns which try to change in individuals the behaviours that lead to social problems or promote behaviours that lead to improved individual or social well-being and public-will campaigns that attempt to mobilize public action for policy change, it attempts to legitimize or raise the importance of a social problem in the public eye as the motivation for policy action or change and media advocacy campaigns seek to achieve policy change by exerting influence on the public will and engagement (Rasha, 2014). Targeted and well-executed campaigns can have small-to-moderate effects on knowledge, beliefs, attitudes and behaviour (Noar, 2006).

> *Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. It is preventable and curable. The WHO states that in 2017, there were an estimated 219 million cases of malaria in 87 countries. The estimated number of malaria deaths stood at 435 000 in 2017. The WHO African Region carries a disproportionately high share of the global malaria burden. In 2017, the region was home to 92% of malaria cases and 93% of malaria deaths. Total funding for malaria control and elimination reached an estimated US$ 3.1 billion in 2017. Contributions from governments of endemic countries amounted to US$ 900 million, representing 28% of total funding* (WHO 2015).

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According to Malaria World (2015), the Roll Back Malaria Partnership (RBM) is the global framework for coordinated action against malaria. They state that Roll Back Malaria Partnership (RBM) was, founded in 1998 by UNICEF, WHO, UNDP, and the World Bank and strengthened by the expertise, resources, and commitment of more than 500 partner organizations, RBM is a public-private partnership that facilitates the incubation of new ideas, lends support to innovative approaches, promotes high-level political commitment, and keeps malaria high on the global agenda by enabling, harmonizing, and amplifying partner-driven advocacy initiatives. RBM provides policy guidance and secures financial and technical support for control efforts in countries and monitors progress towards universal goals.

However, malaria remains a major cause and consequence of poverty and inequity worldwide. It impedes economic development, undermines food security, stops children going to school, and absorbs the capacity of national systems to respond effectively to health security threats (Malaria World, 2015). On the release of a comprehensive new vision, the United Nations Secretary-General, BAN-Ki-moon noted in 2015:

> *Reaching our 2030 global malaria goals will not only save millions of lives, it will reduce poverty and create healthier, more equitable societies. Ensuring the continued reduction and elimination of malaria will generate benefits for entire communities, businesses, agriculture, health systems and households.*

The United Nations Secretary-General also stated that:

> *transforming our understanding of the powerful return on investment of ending malaria deaths into dynamic and effective action on the ground will be essential to realizing the future we want, where all people enjoy the equality and dignity they deserve" (2015,np).*

Malaria World (2015) stated that, a result of worldwide expert consultation with regions, countries and affected communities, the complementary *Global Technical Strategy for Malaria* and AIM documents shared the 2016-2030 timeline of the UN SDGs and provide milestones to measure progress. Together, the documents lay out the technical strategies required to continue driving down the burden of malaria, while charting the investment and collective actions needed to reach the 2030 malaria goals of reducing global malaria case incidence and deaths by 90% - compared to 2015 - and eliminating the disease in an additional 35 countries (Malaria World, 2015). "The new 2030 malaria goals – and the 2020 and 2025 milestones laid out in the WHO and RBM strategies are ambitious but achievable," *said Dr. Pedro Alonso, Director of the WHO's Global Malaria Programme*.

> *We must accelerate progress toward malaria elimination to ensure that neither parasite resistance to drugs, mosquito resistance to insecticides, nor malaria resurgence unravels the tremendous gains to date. We can and must achieve even greater impact to protect the investment the global community has made* (Malaria World, 2015).

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While completely preventable and treatable, WHO has estimated that there will be 214 million cases of malaria infection in 2015, claiming the lives of approximately 472,000 people, the majority are African children under five years of age. Despite unprecedented progress to-date, more than half of the world's population remains at risk of malaria infection today (Malaria World, 2015).

According to Malaria World (2015), adequate and predictable financing and innovations for new tools will be critical to scale-up interventions and reach the WHO/RBM targets of malaria elimination. In RBM's AIM document, experts outline that over US $100 billion is needed to achieve the 2030 target of reducing the malaria burden by 90%, with an additional US$ 10 billion needed to fund research and development of new tools, including new drugs and insecticides. To achieve the first milestone of reducing malaria incidence and mortality rates by 40%, annual malaria investments will need to rise to US$6.4 billion by 2020 (Malaria World, 2015).

While total international and domestic funding peaked at US $2.7 billion in 2013, current declines in international development financing are impacting the world's ability to maintain progress against malaria. Acceleration toward malaria elimination will require increased financing by the international donor community, as well as increased domestic financing by affected countries (Malaria World, 2015). Dr. Fatoumata Nafo-Traoré, Executive Director of the Roll Back Malaria Partnership stated;

> *"Investing to achieve the new 2030 malaria goals will avert nearly 3 billion malaria cases and save over 10 million lives. If we can reach these targets, the world stands to generate US $4 trillion of additional economic output across the 2016-2030 timeframe," "Now, more than ever, we must re-focus our efforts and re-commit our budgets so we can continue saving lives and unlock economic potential in communities around the world."*

At a cost of US $5-8 per case averted, malaria has continually proven to be one of the most cost-effective investments in public health, with relatively low investments yielding high results even beyond the health sector, and experts estimate that the return will only continue growing as countries begin focusing on elimination targets (Malaria World, 2015). A new analysis in AIM reveals that the global return on investment for achieving the 2030 malaria goals is 40:1, rising to an unprecedented 60:1 for sub-Saharan Africa. This reinforces the evidence that continued efforts to reduce the burden of malaria have the potential to stimulate transformative and inclusive growth (Malaria World, 2015).

The RBM Partnership stated that, Malaria reduction and elimination will be critical to the achievement of the Sustainable Development Goals and will help advance development efforts across sectors by reducing school absenteeism, fighting poverty, increasing gender parity and improving maternal and child health (Malaria World, 2015). Lives saved from effective malaria interventions have been linked to a 20% reduction in all-cause child mortality in sub-Saharan Africa since 2000, while efforts to prevent malaria in pregnancy have averted nearly 95,000 newborn deaths between 2009 and 2012. These

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numbers represent an entire generation given the chance to live healthy lives and grow into strong, contributing members of society (Malaria World, 2015).

Several studies have concentrated on the Behavioural Change Communication strategies and media communication of the Roll Back Campaign and focused more on the elimination stage of the campaign, these studies have also shown the need for intermittent prevention treatment, insecticide-treated nets as well as Indoor residual spraying as methods of preventing the malaria disease. However, these studies have only paid attention to media communication and behavioural change strategies to evaluate the campaign. No study focuses on the overall awareness of the campaign especially among pregnant women and Nursing mothers.

The Director of the global malaria programme, Dr Pedro Alonso, commenting on the findings of the 2017 world malaria report, said "We are at a crossroads in the response to malaria". According to the World Malaria Report (2017), meeting the Roll Back Malaria targets will only be possible through greater investment and expanded campaigns and coverage of core tools that prevent diagnose and treat malaria. This suggests that there is a critical need for an overall evaluation of previous and existing campaigns and to determine if there is a need for expanded campaign coverage. There is a need for a concerted effort to evaluate the awareness and knowledge of this campaign, to determine if the initial strategies have reached the halfway point since the pledge.

Objectives:

i. To determine the level of awareness of pregnant women and nursing mothers on the Roll Back Malaria Campaign
ii. To investigate pregnant women and nursing mothers' knowledge of the Roll Back Malaria Campaign.

Research Hypotheses:

$H_0$1: Awareness of the Roll Back Malaria Campaign does not significantly affect pregnant women and nursing mothers.
$H_0$2: Knowledge of the Roll Back Malaria Campaign does not significantly affect pregnant women and nursing mothers.

METHOD

Survey research was conducted to collect and analyse social, economic, psychological and other types of data in this study; it was based on distributing questionnaire to respondents. The sample of this study comprise 400 pregnant women and nursing mothers in Lagos State between ages 18 to 59 years old. The respondents were selected from public and private hospitals, maternity homes, health centres, traditional birth attendants, churches, mosques,

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and schools as the case may be from two selected Local Government Areas. The local Governments selected were Ikeja and Alimosho Local Government Areas, which were facility and community based respectively.

RESULTS AND DISCUSSION

Descriptive Analysis of the Questionnaire Administered

Description	Number	Percentage
Number of Questionnaire Returned	351	88.0
Number of Questionnaire Not Returned	48	12.0
Total Copies of the Questionnaire Administered	**399**	**100**

Source: Field Survey, 2018 & 2024

The table presents the frequency distribution of the copies of the questionnaire administered. Based on the determined sample size, a total number of 399 (100%) questionnaires were distributed; a total of 351 (88%) questionnaires were retrieved while the remaining 48 (12%) could not be retrieved. Thus, the subsequent analyses in this chapter were based on the number of questionnaires retrieved.

The figure 1 presents the frequency distribution of the questionnaires retrieved within the maternity group. The demographic and health details (health facility and prevention tools) of the respondents for the analysis include marital status, age, religion, educational qualification, ethnic group, and media platform. Bivariate analysis using cross-tabulation analysis was employed to show the relationship between each item of the demographic details and the maternity group.

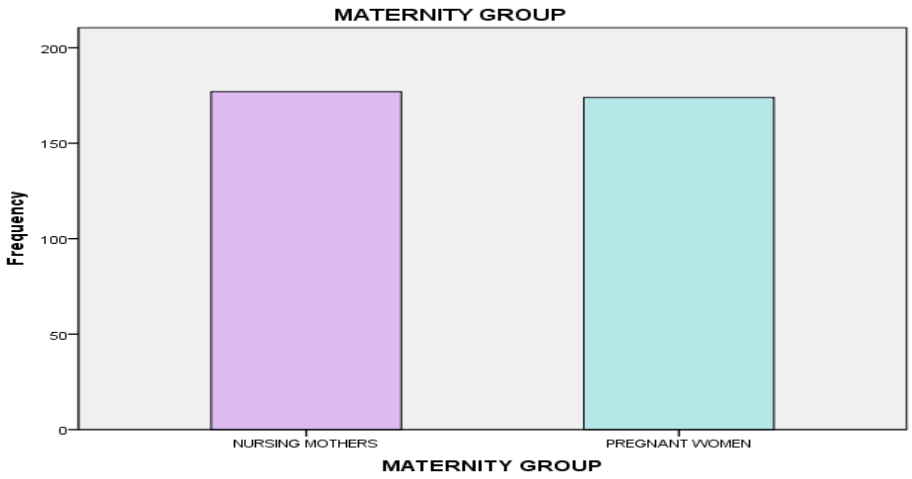

Figure 1.0: Visual display of the frequency distribution of the maternity group
Source: Field Survey, 2018 & 2024

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AGE & MATERNITY GROUP

		Maternity Group					
	Age Categories	**Nursing Mothers**		**Pregnant Women**		**Total**	
		Frequency	**%**	**Frequency**	**%**	**Frequency**	**%**
1	Less than 20 Years	8	2.3	15	4.3	23	6.6
	21 - 30 Years	55	15.7	60	17.1	115	32.8
	31 – 40 Years	71	20.2	72	20.5	143	40.7
	41 - 50 Years	26	7.4	24	6.8	50	14.2
	51 Years& above	17	4.8	3	0.9	20	5.7
	Total	**177**	**50.4**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

The table presents information about the background characteristics of the two groups of respondents; (50. % nursing mothers and 49.6% pregnant women). The majority of the respondents for both maternity categories were (31- 40years), with a total percentage of 40.7%. The minority ages for both nursing mothers and pregnant women were 2.3% and 0.9% respectively.

MARITAL STATUS &MATERNITY GROUP

		Maternity Group					
	Marital Status	**Nursing Mothers**		**Pregnant Women**		**Total**	
	Categories	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
2	Single	25	7.1	37	10.5	62	17.7
	Married	142	40.5	124	35.3	266	75.8
	Divorced	7	2.0	10	2.8	17	4.8
	Widowed	3	0.9	3	0.9	6	1.7
	Total	**177**	**49.6**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

The majority for the marital status for both maternity categories was “Married” with a total percentage of 75.8%, while the least category for both maternity categories was (widowed) with a total percentage of 1.7%.

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RELIGION & MATERNITY GROUP

	Religion Categories	Maternity Group: Nursing Mothers Frequency	%	Pregnant Women Frequency	%	Total Frequency	%
3	Christianity	86	24.5	89	25.4	175	49.9
	Islam	86	24.5	75	21.4	161	45.9
	Traditional	5	1.4	10	2.8	15	4.3
	Total	**177**	**50.4**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

The majority in the religion category for nursing mothers were both Christianity and Islam, each with a percentage of 24.5% respectively, while for pregnant women the majority was Christianity with a percentage of 25.4%. The minority for both maternity groups was Traditional with a total percentage of 4.3%.

EDUCATIONAL QUALIFICATION & MATERNITY GROUP

	Educational _Q Categories	Maternity Group: Nursing Mothers Frequency	%	Pregnant Women Frequency	%	Total Frequency	%
4	Primary	19	5.4	16	4.6	35	10.0
	Secondary	49	14.0	47	13.4	96	27.4
	Tertiary	104	29.6	102	29.1	206	58.7
	Others	5	1.4	9	2.6	14	4.0
	Total	**177**	**50.4**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

The majority in both maternity groups were quite literate with a total percentage of 58.7%, while the minority for both maternity groups was "Others" with a total percentage of 4.0%, others in this category included Masters, Ph.D, vocational training.

ETHNIC GROUP & MATERNITY GROUP

	Ethnic Group Categories	Maternity Group: Nursing Mothers Frequency	%	Pregnant Women Frequency	%	Total Frequency	%
5	Yoruba	106	30.2	102	59.3	208	59.3
	Igbo	37	10.5	41	22.2	78	22.2
	Hausa	17	4.8	21	10.8	38	10.8
	Others	17	4.8	10	7.7	27	7.7
	Total	**177**	**50.4**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

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The majority for the ethnic group category for both maternity groups was Yoruba with a total of percentage 89.5% while the minority for both nursing mothers and pregnant women were Hausa and other ethnic groups (Delta, Calabar, Kogi, Cotonu, Urhobo with a total percentage of 9.6% and 7.7% respectively.

	MEDIA PLATFORM & MATERNITY GROUP						
		Maternity Group					
	Media Platform Categories	Nursing Mothers		Pregnant Women		Total	
		Frequency	%	Frequency	%	Frequency	%
6	Television	63	17.9	62	17.7	125	35.6
	Radio	85	24.2	52	14.8	137	39.0
	Newspaper	4	1.1	11	3.1	15	4.3
	Social media	17	4.8	21	6.0	38	10.8
	Billboards	8	2.3	19	5.4	27	7.7
	Community adv.	0	0	9	2.9	9	2.9
	Total	**177**	**50.4**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

The dominant media platform for nursing mothers was Radio with a percentage of 24.2%, while for pregnant women was (Television) with a percentage of 17.7%. The least utilized media platform for both maternity groups was (community advocacy) with a 0% & 2.9% respectively.

	HEALTH FACILITIES & MATERNITY GROUP						
		Maternity Group					
	Health Facility Categories	Nursing Mothers		Pregnant Women		Total	
		Frequency	%	Frequency	%	Frequency	%
7	Hospital	121	34.5	117	33.3	238	67.8
	Home Mgt.	8	2.3	13	3.7	21	6.0
	R_ Side drug seller	6	1.7	8	2.3	14	4.0
	Herb Seller	26	7.4	24	6.8	50	14.2
	Pharmacy	16	4.6	12	3.4	28	8.0
	Total	**177**	**50.4**	**174**	**49.6**	**351**	**100**

Source: Field Survey, 2018 & 2024

It was revealed that the dominant health facility utilized by both maternity groups was (Hospital) with a total percentage of 67.8% while the least utilized health facility for both groups was (Road side Medicine seller) with a total percentage of 4.0%.

H₀1: Awareness of the Roll Back Malaria Campaign does not significantly affect pregnant women and nursing mothers.

The test of significance states that; Awareness: $H_o: \boldsymbol{\alpha_1} = 0$ and $H_1: \boldsymbol{\alpha_1} \neq 0$
The p-value of the z-statistic of the partial regression coefficient of $\boldsymbol{AWN}$ is 0.0000 which is less than 5% (Appendix 5). Thus, the null hypothesis is rejected. This implies that $\boldsymbol{AWN}$

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of the Roll Back Malaria Campaign is statistically significant to individually influence ***L*** (logit) (pregnant women and nursing mothers). In other words, awareness has a significant impact on maternity patients. The description in the table below corroborates the rejection of the hypothesis, that being aware of the Roll Back Malaria Campaign significantly affects pregnant women and nursing mothers. Being aware of the Roll Back is the first and integral aspect of the success of the Roll Back Malaria Partnership. Media platforms, NGOs, and ministries are involved in facilitating the awareness level of pregnant women and nursing mothers. The test of hypothesis, suggests that without awareness there is no motive to practice the campaign strategies and as a result increases malaria death records.

Descriptive Analysis of Awareness

S/N	Item	N	SA	A	N	D	SD	MEAN	S-D
1	Malaria is caused as a result of mosquito bites, especially in an unclean environment	**351**	**214** (61.0%)	**103** (29.3%)	**7** (2.0%)	**13** (3.7%)	**14** (4.0%)	4.396	0.991
2	Malaria is a killer disease for children below age 5 / pregnant women	**351**	**166** (47.3%)	**135** (38.5%)	**26** (7.4%)	**14** (4.0%)	**10** (2.8%)	4.234	0.954
3	Malaria is a preventable and treatable disease	**351**	**173** (49.3%)	**153** (43.6%)	**17** (4.8%)	**7** (2.0%)	**1** (0.3%)	4.396	0.701
4	Convulsion is a sign of severe malaria	**351**	**87** (24.8%)	**92** (26.2%)	**71** (20.2%)	**37** (10.5%)	**64** (18.2%)	3.288	1.418
5	Community-based providers of insecticides and mosquito nets are always available	**351**	**53** (15.1%)	**97** (27.6%)	**60** (17.1%)	**46** (13.1%)	**95** (27.1%)	2.906	1.446
6	Prescriptions of anti-malaria drugs by health providers are always effective for your child	**351**	**78** (22.2%)	**122** (34.8%)	**62** (17.7%)	**51** (14.5%)	**38** (10.8%)	3.430	1.278
7	Road shows on malaria prevention and treatment are common in your community	**351**	**34** (9.7%)	**72** (20.5%)	**59** (16.8%)	**55** (15.7%)	**131** (37.3%)	2.496	1.412
8	Advocacy visits, community sensitization and mobilizations on malaria prevention and treatment occur frequently in your community	**351**	**50** (14.2%)	**61** (17.4%)	**57** (16.2%)	**58** (16.5%)	**125** (35.6%)	2.581	1.471
9	Information on the prevention of malaria and its control/treatment are always available on any form of media	**351**	**135** (38.5%)	**104** (29.6%)	**55** (15.7%)	**39** (11.1%)	**18** (5.1%)	3.852	1.196
10	Individuals have free access to improved and effective drugs through community-based providers	**351**	**35** (10.0%)	**74** (21.1%)	**85** (24.2%)	**59** (16.8%)	**98** (27.9%)	2.684	1.342

Source: Field Survey, 2018 & 2024 *using SPSS; some of the variables in this table also constitute the variables.*

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The table presents the descriptive statistics of the respondents' responses to the statement/questions on Awareness. Each item in Table 4.4 measures the Awareness of maternity patients of the Roll Back Malaria Campaign in which the respondents were expected to choose from the options: "strongly agree (***SA***)", "agree (***A***)", "Neutral (***N***)", "disagree (***D***)" and "strongly disagree (***SD***)" to express their perceptions to each of the of statements or items. The mean of the response scale is 3.0. Therefore, the responses of any scaled questions with a mean below 2.5 are considered undesirable. In contrast, responses to any scaled questions very close to 5.00 are considered to have a greater influence on Awareness. The table shows that each statement or item has a mean response ranking between 2.5 and 5.00, which is desirable. This implies that a high level of awareness tends to influence pregnant women and nursing mothers. Given the mean and standard deviation (***SD***) of the responses in Table 4.4 above, the categories or items such as item **1** (*mean* = 4.39, *SD* = 0.991), item **2** (*mean* = 4.23, *SD* = 0.954), and item 3 (*mean* = 4.40, *SD* = 0.701) tend to have a greater influence on Awareness as their mean of the responses are between 4.00 and 5.00. Also, the majority of the responses clustered around 'agreed/strongly agreed' since their standard deviations (*SD*) are substantially low.

H_0^2: Knowledge of the Roll Back Malaria Campaign does not significantly affect pregnant women and nursing mothers.

The test of significance states that; Knowledge: $H_o: \boldsymbol{\alpha_2} = 0$ and $H_1: \boldsymbol{\alpha_2} \neq 0$
The p-value of the z-statistic of the partial regression coefficient of ***KNW*** is 0.0000 which is less than 5% (see Appendix 5). Thus, the null hypothesis is rejected. This implies that ***KNW*** of the Roll Back Malaria Campaign is statistically significant to individually influence ***L*** (logit) (pregnant women and nursing mothers). In other words, knowledge has a significant impact on maternity patients. The description of responses in the table below corroborates the rejection of the hypothesis, having the knowledge of the Roll Back Malaria Campaign significantly affects the pregnant women and nursing mothers. Knowledge determines their attitude especially their acceptance of prevention methods and malaria treatments as well as encourages consistency in the practice of malaria control strategies. Knowledge is therefore crucial for halving malaria deaths; it is a major determinant in the re-evaluation process of all Roll Back Malaria Campaign strategies.

Descriptive Analysis of Knowledge

S/N	Item	N	SA	A	N	D	SD	MEAN	S-D
1	Malaria is caused as a result of mosquito bites, especially in an unclean environment	**351**	**214** (61.0%)	**103** (29.3%)	**7** (2.0%)	**13** (3.7%)	**14** (4.0%)	4.396	0.991
2	Malaria is a killer disease for children below age 5 / pregnant women	**351**	**166** (47.3%)	**135** (38.5%)	**26** (7.4%)	**14** (4.0%)	**10** (2.8%)	4.234	0.954

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3	Malaria is a preventable and treatable disease	**351**	**173** (49.3%)	**153** (43.6%)	**17** (4.8%)	**7** (2.0%)	**1** (0.3%)	4.396	0.701
4	Convulsion is a sign of severe malaria	**351**	**87** (24.8%)	**92** (26.2%)	**71** (20.2%)	**37** (10.5%)	**64** (18.2%)	3.288	1.418
5	Hospitals conduct seminars on the prevention and treatment of malaria in children / pregnant women	**351**	**97** (27.6%)	**147** (41.9%)	**59** (16.8%)	**43** (12.3%)	**5** (1.4%)	3.821	1.017
6	There are challenges associated with the procurement and use of any of the prevention methods	**351**	**110** (31.3%)	**110** (31.3%)	**71** (20.2%)	**43** (12.3%)	**17** (4.8%)	3.721	1.169
7	Malaria Campaign messages were frequently displayed/relayed on all media platforms in 2017	**351**	**105** (29.9%)	**85** (24.2%)	**81** (23.1%)	**41** (11.7%)	**39** (11.1%)	3.501	1.324

Note: *Field Survey, 2018*

The table presents the descriptive statistics of the respondents' responses to the statement/questions on Knowledge. Each item in table 4.4 above measures the Knowledge of maternity patients of the Roll Back Malaria Campaign in which the respondents were expected to choose from the options: "strongly agree (*SA*)", "agree (*A*)", "Neutral (*N*)", "disagree (*D*)" and "strongly disagree (*SD*)" to express their perceptions to each of the of statements or items. The mean of the response scale is 3.0. Therefore, the responses of any scaled questions with a mean below 2.5 are considered to be undesirable while responses of any scaled questions very close to 5.00 are considered to have greater influence on Knowledge. Hospital seminars, understanding the myths of malaria, media platforms used in disseminating Malaria Campaign strategies as well as the challenges associated to these campaigns all constitutes the development of pregnant women and nursing mother's knowledge of Roll Back Malaria Campaign. The table shows that each of the statements or items has a mean response ranking between 2.5 and 5.00 which are considered desirable. This implies that high level of knowledge tends to influence pregnant women and nursing mothers. Given the mean and standard deviation (*SD*) of the responses in Table 4.5 above, the categories or items such as item 1 (*mean* = 4.39, *SD* = 0.991), item 2 (*mean* = 4.23, *SD* = 0.954), and item 3 (*mean* = 4.40, *SD* = 0.701) tend to have greater influence on Knowledge as their mean of the responses are between 4.00 and 5.00. Also, the majority of the responses clustered around 'agreed/strongly agreed' since their standard deviations (*SD*) are substantially low. This implies that campaign messages, seminars, procurement of malaria kits, and understanding myths all constitute the effectiveness of the Knowledge of Roll Back Malaria Campaigns.

CONCLUSION

The findings from this study suggested that the level of awareness was relatively high. This implies that as of 2018, both maternity groups were highly aware of the Roll Back Malaria

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Campaigns, especially via adverts on the Radio and Television. The most advertised prevention tool both groups are aware of is the long-lasting Insecticide Net and Artemisin-based Combination. This finding agrees with the Nwoke et al. (2017) study which focused on the awareness and the use of Insecticide Treated Nets for Malaria Control in Amainyi, Ihitte-Uboma Local Government, and Imo State, Nigeria. The study revealed that 86.5% of the respondents were aware of the use of Insecticide-Treated Nets (ITNs) in the control of malaria while 33(13.5%) were not aware. It was discovered that both maternity categories are quite aware of the misconceptions of malaria and have been reoriented through the various anti-malarial campaigns. Such misconceptions include; Convulsion is a sign of severe malaria, malaria is a killer disease for children below age 5 and pregnant women, etc. Repetition of adverts and hospital seminars were revealed to be factors that influenced the awareness of the Roll Back Malaria Campaigns. These findings suggest that awareness of the Roll Back Malaria Campaign in Lagos State is very high, but there is still a need for more concerted effort in communicating the campaign to have a 100% awareness level; which would help reduce the death rate caused by malaria.

Awareness and Knowledge are quite similar in concept, but when put in perspective knowledge deals with doing further research on a particular phenomenon, having already been exposed to it (awareness) through adverts, community sensitization, social marketing, etc. From the findings in table 4.5, Knowledge of Roll Back Malaria Campaign was impressively high. Regardless of the level of education of the respondents, it was discovered that hospital seminars, and constant repetition of anti-malaria adverts especially on Radio and Television increased the level of knowledge of the Roll Back Malaria Campaign. Using the Social Cognitive Learning Theory of learning and social behaviour, it posits that new behaviours can be acquired by observing and imitating others. In advertising, such concept is called motivation, what influences the decision to research on a prevention tool or treatment.

In this study, hospital seminars and adverts influenced the level of knowledge the maternity group has of the Roll Back Malaria. This finding agrees with Ankomah et al. (2014) who embarked on a study on the use of mass media in promoting the use of bed nets is effective. Their results showed that respondents who knew that sleeping under ITN prevents malaria were 3.2 times more likely to sleep under net (OR: 3.15; 95% CI: 2.28 to 4.33; $P< 0.0001$). Those who listened to radio are about 1.6 times more likely to use ITN (OR: 1.56; 95%CI: 1.07 to 2.28; $P = 0.020$), while respondents who had heard of a specific (monitored) sponsored radio campaign on ITN are 1.53 times more likely to use a bed net ($P = 0.019$). As much they would have expected the respondents who have attained secondary education or higher to use net, their findings showed a reverse relationship.

These findings suggests that media platforms and hospital seminars/advocacy increase the pregnant women and nursing mothers' level of knowledge; consistency in these areas of information dissemination and knowledge building will help halve malaria death cases.

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