IDENTIFYING KEY COMMUNICATION CHANNELS USED TO ACCESS MALARIA VACCINE RELATED INFORMATION BY RESIDENTS OF LOKOJA, KOGI STATE

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DOI: https://doi.org/10.64633/wissj.v10i3.19

Keywords

Channels, Communication, Information, Malaria, Vaccine

Abstract

Communication is touted as the fulcrum on which all human endeavours revolve. For effective communication to take place, all its elements, one of which is the channel, must be appropriate and specific to the audience. This study considers and interrogates the key communication channels used to access malaria vaccine related information by residents of Lokoja in Kogi State.

Anchored on the assumptions of the Knowledge Gap Theory, the study engages a quantitative research design using the survey approach with questionnaire as the instrument for the collection of the primary data. 96 participants were sampled from an estimated population of 10,000 using a multistate sampling procedure involving the stratified and judgemental sampling techniques. Findings of the study indicate that many communication channels are used to access information on malaria vaccines in the study area with the most prominent being friends, associates, family members, and social gatherings. Further findings indicate that main stream media also play a role in the dissemination of vaccine related information. More significantly, empirical evidence from the study show that some inherent weaknesses of the communication channels diminish their reliability as appropriate platforms used to access malaria vaccine related information by residents of the study area. On the strengths of these findings, the study concludes that the individual weaknesses of the communication channels are detrimental to the confidence the populace repose in them as the appropriate platforms for disseminating vaccine information. based on the findings and the conclusion, it is recommended that public health institution such as the Federal Ministry of Health, The National Primary Healthcare Development Agency with its branch in Lokoja should collaborate with the leaders of the various communities in the study area to identify the most appropriate communication channels through which malaria related

information can be disseminated to the target audience.

Introduction

Malaria, has remained one of the sternest public health troublesin the world, killing thousands of people especially under five children. All medical efforts put in place to contain the blight of the disease have yielded little positive results. Oladimeji et al. (2018) describe malaria as a prevalent tropical disease, with high morbidity, mortality, and economic as well as social impacts on both the social and economic environments where it is endemic. This implies that malaria infections do not only take a toll on the health and wellbeing of the victims but also exert tremendous burden on the economy as most of the man hours required for productive ventures are wasted when the disease strikes. Maduka (2018) states that the malaria scourge continues to be a major public health problem in at least 97 countries and territories in the tropics and subtropics particularly in Africa, with Nigeria recording the greatest number of cases. This means that the disease is a serious challenge that demands concerted efforts from both health practitioners and communicators to enhance the efforts geared towards its elimination or at least mitigating its effects. Nnaji and Ozdal (2023) affirm that malaria kills over 400,000 people in Nigeria per a year. Also narrating the damage caused to human lives by malaria, WHO (2021) reports that a child dies of malaria snags every minute in sub-Saharan Africa with Nigeria accounting for more than 100, 000 of the cases. These accounts paint a grim picture of the severity of the disease, which requires every profession to join in the fight to eliminate it.

Moreover, in its assessment of the prevalence of malaria in Nigeria, WHO (2022) report shows that there are over 68 million cases of the disease in the country with each of the statesand Federal Capital Territory (FCT) in the north central zone contributing a significant percentage. In Kogi State, WHO (2022) reports over 1.5 million cases of the disease affecting mostly children and pregnant women. What this implies is that malaria presents a serious health challenge in the state as there are high incidents of infections in all the local government areas of the state. Therefore, any effort designed to stem the tide of the disease must involve every member of the society, and that is where communication becomes a vital too for sensitizing the populace to take informed decisions about their health.

In its bid to fulfil its core mandate of lessening the infections and death rates of malaria in all parts of the country, the Nigerian Malaria Control Programme (NMCP) has designed and implemented different malaria control measures aimed at eliminating the disease. Oladimeji et al. (2018) identify some of theses measures to include: prevention of malaria transmission through integrated vector management (IVM) strategy; prompt diagnosis and treatment of clinical cases at all levels in all sectors of health care; prevention and treatment of malaria in pregnancy.Away from these three core interventions, Ajayi and Emeto (2023) identify some other approaches to include: indoor residual spray, insecticide-treated nets, environmental modification, and malaria case management. On their part, Nnaji and Ozdal (2023) identify two more control measures that integrate application of medication as well as door and window nets. However, despite these efforts, the disease continues to cause serious childhood illnesses and deaths in Kogi state and other endemic areas.

Adopting a new and more effective malaria control modality, Ajayi and Emeto (2023) reports that a vaccine, RTS,S/ASO1 (RST,S), was tested and approved for introduction into routine Immunization programmes in the country.Unfortunately, as Musa-Booth et al. (2021) rightly observe, previous introduction of vaccination programmes in Nigeria have faced challenges in the area of non-acceptability of information about the programmes occasioned by the lack of trust in the channels of such information. While other scholars have suggested the use of effective communication as a panacea to failed vaccination programmes, little or no attention has been paid to the place of appropriate channels through which such communication should be routed. This study is therefore interested in the key channels of information about the malaria vaccine available to residents of Kogi state and the authenticity of such media. The study is therefore designed to identify the key communication channels of information about malaria vaccine, the reliability of the channels, and the amount of trust in the channels by the population in the study area.

Statement of the Problem

Previous vaccination programmes in Nigeria have yielded little or no successes becauseof the use of faulty channels in communicating vaccine related information that have been criticised for either being inappropriate or not taking into account audience specific information needs leading to the failure of most vaccination programmes. Nigeria suffers the world's greatest malaria affliction, with more than 68 million cases and 207,000 deaths reported annually (WHO, 2022). Of the 68 million cases of malaria infections in the country,Kogi State contributes 1.5 million cases. This means that the state is in dire need of protection from malaria because as Yesufu (2023) estimates, its death toll on children and pregnant women is high.

In order to promote maternal and child health, Nigeria has made significant strides aimed at keying into the use of vaccines to protect her citizens against malaria infections. Yesufu (2023) reports that on April 17, 2023, Nigeria approved a new malaria vaccine called R21, and in early trails, up to 80 percent of children who were vaccinated did not develop the disease. Unfortunately, as Musa-Booth et al. (2021) rightly observe, previous introduction of vaccination programmes in Nigeria have faced challenges in the areas of awareness and the credibility of the sources from which information about the vaccines is gleaned.

This study is therefore interested in the sources from which residents of the study area garner their information about malaria vaccines with particular emphasis on the reliability of such sources.

Objectives of the Study

The broad objective of the study was to ascertain the key communication channels used to access malaria vaccine related information by residents of lokoja in kogi state but more specifically, the study sought to:

1. identify the key channels of accessing information about malaria vaccine in Lokoja, Kogi State
2. ascertain the reliability of the key channels used to access malaria vaccine related information in Lokoja, Kogi State.

Immunization remains the backbone in defending children against malaria infections and other vaccine prevented diseases worldwide but achieving universal vaccination coverage, as WHO (2024) notes, has been a significant global

challenge in lower and middle-income countries where more than 12.4 million children received no vaccines in 2020. The World Health Organisation reports that Nigeria faces a particularly alarming situation among these countries, with over 2.2 million estimated zero-dose children in 2021. To address this pressing issue, adequate information about vaccines needs to be disseminated to the target populations through channels they are familiar with to get them to buy into the vaccination programmes and take informed decisions. Unfortunately, Musa et al, (2022) observes that most times, information about malaria vaccines is disseminated through eccentric channels that are prone to misinformation.

Key Channels Used to Access Malaria Vaccine Related Information

Most vulnerable groups need basic information about the approved malaria vaccine to convince them to accept it. What this means is that the success of the vaccine depends on the amount of credible information and sensitization, through appropriate channels, given to the populace about it in order to enlighten them to accept the vaccine because as Marshall McLuhan stated, sometimes, the channel is the message.

Some of the primary channels of information about malaria vaccine as identified by Chukwuocha et al. (2018) include: television, radio, newspapers, health workers, and relatives. On his part, Brydon (2024) identifies siblings, parents, faith leaders, traditional leaders, or someone from the community as some of the most trusted channels of information on health care generally but vaccines in particular. He also includes digital and social media in the league of channels from which health information can be accessed. Most times, many people in low income countries lack information on health care, which is considered a universal human right,not necessary for lack of information but because of the use of inappropriate channels of communication. This explains why Brydon (2024) states that "many do not know about available health services in their community."

Reliability of Available Channels of Information on Malaria Vaccines

Many vaccination experts and other healthcare givers are becoming increasingly worried about the steady decline of confidence in channels of vaccine information. Rodrigues et al. (2023) maintain that all media platforms have roles they play in shaping vaccination attitudes and behaviours. The authors further observe that heavy reliance on mass and traditional media for vaccine related information is associated with higher likelihood of information overload, disinformation, and misinformation. that leads to conspiracy theories which portray vaccines as harmful. According to Eagan et al. (2023, 23), this dominant narrative on mistrust in channels used to access vaccine information assumes that it is primarily the result of the use of inappropriate media, and therefore if individuals cannot access information about the benefits of and value of malaria vaccines, the disease will continue to sprawl out of control.

Theoretical Foundation

This study was premised on the tenets of the Knowledge Gap Theory.

Propounded in 1970 by Tichenor, Donohue and Olien, the knowledge gap theory maintains that increase in media output, rather than even out differences between the information-rich and the information-poor actually emphasize those differences since those at higher socio-economic levels acquire information much faster and much more easily than those at the lower levels because of their exposure to appropriate

channels. The knowledge gap supposition is a mass communication theory that examines how a member in society processes information differently based on the channels from which such information originates.

The two principal concerns of the Knowledge Gap theory as identified by Mbacham et al. (2019) are: how knowledge is distributed in society; and how media channels influence that distribution. According to the theorists, the basic assumption of the theory is that knowledge is distributed unevenly throughout society. As media channels proliferate in a given society, so will the knowledge gap between the privileged and underprivileged social groups contrary to what would be the normal expectation."

Earlier adopted by Lind and Boomgaarden (2019) in their study titled What we do and don't know: a meta analysis of the knowledge gap hypothesis, the central assumption of the theory that an increase of mass media information fosters knowledge divides between those with less and more formal education was supported. The authors therefore assert that while television fulfils a role as a knowledge gap maintainer, print media and especially online media use appears to increase knowledge inequalities between groups with discrepant access to media channels. Similarly, Wang et al. (2021) adopted this theory in their study which found that educational level, perceived salience of information, and internet media use can significantly predict the difference in health knowledge level which indicates that media use will expand health knowledge gap between groups with different access to media channels.

The greatest weakness of the theory is that; it may not be relevant today because a fifty-year-old media theory may fail to understand the complexities of media landscape today. The original article outlining this theory talks about newspapers as the dominant media form meanwhile, the new media behaves differently as they have less gatekeepers than old media as anyone can start a website and start sharing their information with the world yet, this theory does not account for the way new media works.

In spite its weakness, the relevance of this theory to the current study is that it emphasises the need for adequate information through appropriate channels on malaria vaccines to be introduced into communities so that the channels will enhance the relevanceof the information.

Methods

This study adopted a quantitative research design and utilized the survey method with a structured questionnaire as the instrument for the collection the primary data. The study was limited to residents of Lokoja Local Government Area of Kogi State with an estimated population of 10, 000 (Metro Area Population, 2026). The sample size for the study was determined using a multistate sampling procedure involving the stratified and judgemental sampling techniques. At the first stage, the stratified technique was used to select communities within the local government area. At the second state, judgemental technique involving Cozby's Table for sample size determination at 95% confidence level and a margin of error of ±5% was used to determine a 96 sample size for the study.This sample size is considered adequate because as Cozby (2004) states, a sample size of 150 respondents will describe a population of 1,500 or 15 million with the same degree of accuracy.At the last stage, the purposive sampling technique was used to select the direct participants who met the prescribed criteria for the study. Data collected were analyzed using descriptive statistics with the aid of tables, frequencies and simple percentages.

Ethical Considerations

Attention was given to the following ethical issues

Informed Consent

Participants' consent was sought and obtained before they were recruited into this study.

Voluntary Participation

All the participants in the study were free to opt in or out of the study at any point in time. Specifically, the participants were told the benefits and risks behind the study before they agreed or declined to join.

Anonymity and Confidentiality

Personally identifiable data of the participants were not collected. Moreover, confidentiality was ensured by anonymizing the personally identifiable data so that it will not be linked to other data by anyone else.

Results

Out of the 96 copies of the instrument sent out, 92 representing 96%response rate were returned in perfect condition while 4 copies representing 4% mortality rate were lost. Data gathered from the instrument are presented and analyzed below.

Table 1: Demographic Information of Respondents

Variable	Frequency	Percentage
Gender		
Male	47	51
Female	45	49
Age Range		
18-28	10	10
29-38	30	33
39-48	30	33
49 and over	22	24
Educational Level Attained		
Tertiary	30	33
Secondary	40	43
Primary	22	24

Source: Field Survey, 2026

Data in Table 1, which contains demographic information about the respondents indicate that both sexes participated in this study though a slight majority of them, 51% were male. Data in the Table also reveal that a representative cumulative of 74% of the respondents were aged between 18 and 48 years while the remaining 24% were aged 49 years and above. Data in the Table further show that most respondents had impressive educational attainments even up to tertiary levels (33%). This implies that the respondents were both old enough and educationally qualified to appreciate the issue examined in this study.

Table 2: Awareness of Channels that Disseminate Malaria Vaccine Related Information

Variable	Frequency	Percentage
Fully Aware	86	94
Partially Aware	6	6
Not Aware	-	-

Source: Field Survey, 2026

Table 2 contains information on respondents' awareness of channels that disseminate malaria vaccine related information. Data in the Table indicate that the respondents are well aware of channels that disseminated information on malaria vaccine related information in the study area. This is because while 84%, a clear majority were fully aware of the channels, 6% were partially aware. This means that there is high awareness of media channels that disseminated information on malaria vaccines in the study area.

Table 3: Specific Channels Used to Access Information on Malaria Vaccines

Variable	Frequency	Percentage
Main stream media (Radio, Television, and Newspapers)	30	33
Friends, Associates, Family members, and Social gatherings	40	43
Social media	22	24

Source: Field Survey, 2026

Data in Table 3 show that the chunk of information on malaria vaccine, a cumulative representative of 57%, is disseminated through main stream media channels such as radio, television, newspapers, and social media while 43%, a significant number is disseminated through eccentric channels such as friends, associates, family members, and social gatherings. This means that various channels are used to access malaria vaccines.

Table 4:Reliability of Channels Used to Access Information on Malaria Vaccines

Variable	Frequency	Percentage
Reliable but are elitist	7	8
Reliable but contain some confusing elements such as half truths, personal opinions, and misinformation	85	92
Unreliable	-	-

Source: Field, Survey, 2026

Data in Table 4, which contains information on the reliability of channels used to access malaria vaccines related information indicate that in spit their relative reliability, channels

used to access malaria vaccine information contain some elements that are inimical to the level of confidence the populace repose in them. This is because 92% of the respondents stated that the channels are prone to half truths, personal opinions, and misinformation. Therefore, there is the need to strengthen the channels by removing those elements that are capable of reducing the reliability of the channels

Discussion of Findings

This study was designed to identify key communication channels used by residents of Lokoja in Kogi State to access malaria vaccine related information. Empirical evidence from the study fulfilled the its objectives and inveterate the postulations of the Knowledge Gap Theory.

Objective one requestedthe key channels of accessing information about malaria vaccine in Lokoja, Kogi State. Findings from the study reveal that there is a myriad of channels that disseminate information on malaria vaccines in the study area. However, the main channels of accessing vaccine related information are the main stream media such as radio, television, news papers, and social media, which made a cumulative representative 57%. Other identified peculiar channels used to access malaria vaccine related information by residents of the study area are friends, associates, family members, and social gatherings. This finding collaborates that of Chukwuocha et al. (2018) who identified television, radio, newspapers, health workers, and relatives as the channels that transmit vaccine related information. This implies that anyone desirous of communication vaccine related information should be mindful of the channels of communication to employ so the the communicator and the audience will be in the same frame of reference. Inthe same vein, the finding agrees with that of Brydon (2024) who established that siblings, parents,or someone from the community as well as digital and social media are some of the channels of information on health care generally but vaccines in particular.

The finding confirms theoretical beliefthat media channels are the center of how knowledge is distributed in society; and how media channels influence that distribution (Knowledge Gap Theory). Based on this finding, it is imperative toemploy all the available channels in order to combine their strengths and even out their weaknesses in disseminating malaria vaccine related information in the study area.

Objective two sought to ascertain the reliability of the key channels used to access malaria vaccine related information in Lokoja, Kogi State. Empirical evidence from this study indicate that though relatively reliable, channels used to access malaria vaccine related information contain some elements that are detrimental to the level of confidence the populace repose in them. For instance, 92% of the respondents affirmed that the interpersonal channels such as friends, family members, associates, and social gatherings are prone to half truths, personal opinions, and misinformation while 8% maintained that the elitist nature of the main stream channels is detrimental to the comprehension of their messages. These findings tally with existing literature, which posit that many vaccination experts and other healthcare givers are becoming increasingly worried about the steady decline of confidence in channels of vaccine information (Ahmad et al., 2026).The findings are in tandem with those of Rodrigues et al. (2023) who observed that heavy reliance on mass and traditional media for vaccine related information will likely create information overload, disinformation, and misinformation that breed conspiracy theories which portray vaccines as

harmful. The findings also confirm the position of Eagan et al. (2023) that this dominant narrative on mistrust in channels used to access vaccine information is primarily the result of the use of inappropriate media.

These findings confirm the central assumption of the Knowledge Gap theory that an increase of mass media information fosters knowledge divides between those with less and more formal education. The findings also agree with the theory's postulation that as media channels proliferate in a given society, so will the knowledge gap between the privileged and underprivileged social groups contrary to what would be the normal expectation. On the basis of this findings, it is instructive to engage audience specific channels to disseminate vaccine related information to the residents of Lokoja in Kogi State.

Conclusion

This study considered the key communication channels used to access malaria vaccine related information by residents of Lokoja in Kogi State and interrogated the reliability of such channels. The study established that residents of the study area engage many communication channels both mainstream and interpersonal to access information on malaria vaccines with the highest being friends, associates, family members and other social gatherings. Results of the study are an indication that interpersonal communication channels with their inherent challenges remain very important channels of communication used to access malaria related information. It is therefore the position of this study that the myriad of communication channels from which residents glean their malaria vaccine related information come with their individual weaknesses that are detrimental to the confidence the populace repose in them, and this requires selecting audience specific communication channels to disseminate vaccine related information to the residents of the study area.

Recommendations

Arising from the findings of this study and the conclusion reached, the following recommendation have been made:

1. Public health institution such as the Federal Ministry of Health, The National Primary Healthcare Development Agency with its branch in Lokoja should collaborate with the leaders of the various communities in the study area to identify the most appropriate communication channels through which malaria related information can be disseminated to the target audience.

2. The inherent barriers to easy access to vaccine information in the communication channels should be removed to eliminate the weaknesses that diminish their credibility and reliability in the eyes of the study population.

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