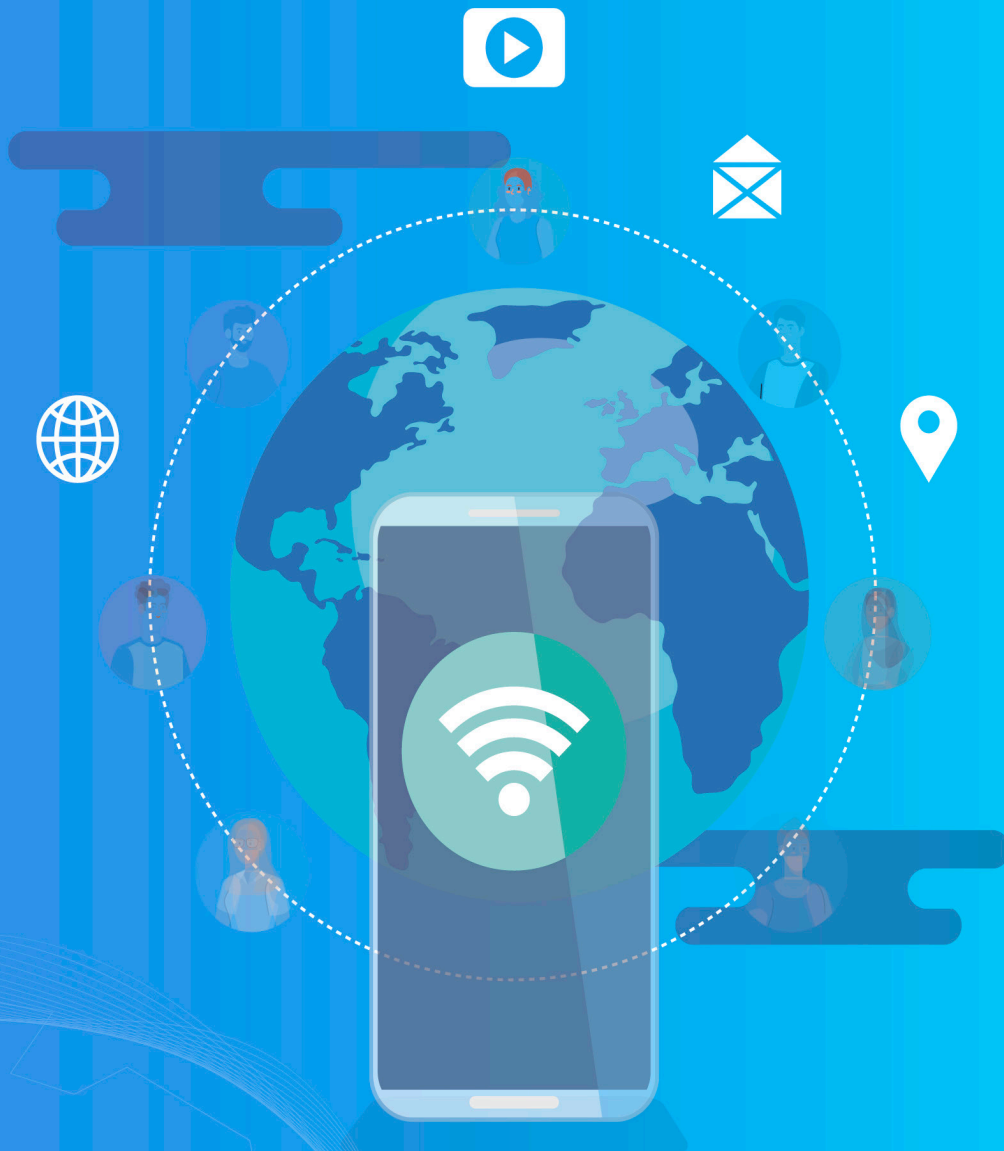




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Assessment of the Impact of Mass Media on Knowledge and Awareness of Malaria Prevention in Yobe State, Nigeria

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ABSTRACT

Malaria remains a leading cause of morbidity and mortality in Nigeria, particularly among rural populations. Mass media campaigns are considered critical tools for increasing public knowledge and awareness about malaria prevention and control. This study assesses the impact of mass media on knowledge and awareness of malaria prevention among residents of Yobe State, Nigeria. Using a cross-sectional survey design, data were collected from 300 respondents via structured questionnaires. Descriptive statistics and regression analysis were employed to examine the relationship between exposure to mass media and malaria prevention knowledge. Findings indicate that frequent exposure to radio and television programs significantly increases awareness of malaria symptoms, preventive measures, and treatment options. Social media also contributes to knowledge dissemination, particularly among younger populations. The study concludes that mass media is an effective medium for promoting malaria prevention and recommends enhanced use of both traditional and digital media channels to improve public health outcomes.

INTRODUCTION

Malaria continues to pose a significant public health challenge in Nigeria, representing one of the leading causes of morbidity and mortality across the country. According to the World Health Organization (WHO, 2023), Nigeria accounts for a substantial proportion of global malaria cases and deaths, with rural and underserved communities disproportionately affected. The disease imposes heavy social and economic burdens on households, including frequent outpatient visits, hospitalization, loss of productivity, and high healthcare costs. Children under five years of age and pregnant women are particularly vulnerable, highlighting the urgent need for effective prevention strategies. Despite substantial government and international interventions including distribution of insecticide-treated nets (ITNs), indoor residual spraying, seasonal malaria chemoprevention, and public health campaigns malaria prevalence remains high in many Nigerian states, including Yobe State, a region characterized by both high malaria incidence and limited access to healthcare services.

One of the critical factors contributing to persistent malaria transmission is limited awareness and poor knowledge of preventive measures among the general population. Knowledge gaps often lead to delayed treatment seeking, improper use of preventive tools such as ITNs, and inadequate participation in environmental sanitation initiatives that reduce mosquito breeding. In many rural areas, residents may not fully understand the link between mosquito exposure and malaria transmission, or they may rely on traditional beliefs and local practices that are insufficient for effective malaria prevention. This

situation underscores the importance of effective health communication strategies that can improve awareness, motivate preventive behaviors, and ultimately reduce malaria incidence.

Mass media has emerged as a pivotal tool in public health communication, particularly in resource-constrained settings. The term “mass media” encompasses radio, television, newspapers, and increasingly, digital and social media platforms. These channels provide a means to disseminate health information to large and diverse audiences, shaping knowledge, attitudes, and behaviors related to disease prevention. In Nigeria, mass media campaigns have historically played a significant role in public health education, including polio vaccination drives, HIV/AIDS awareness programs, and campaigns promoting safe maternal and child health practices. The use of radio and television is particularly critical in rural areas where literacy levels are low and internet access is limited, while social media platforms have become increasingly influential among urban and younger populations.

The theoretical underpinning of this study is anchored on the Health Belief Model (HBM), which posits that individuals are more likely to adopt preventive health behaviors when they perceive themselves as susceptible to a disease, recognize the severity of the disease, believe in the benefits of preventive actions, and encounter cues to action that prompt behavior change (Rosenstock, 1974). Mass media serves as a primary cue to action by raising awareness of malaria risks, educating the public on preventive strategies, and encouraging timely treatment-seeking behaviors. Exposure to accurate, consistent, and

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culturally appropriate health messages can significantly influence individuals' decisions to adopt protective measures, such as sleeping under ITNs, eliminating standing water, and seeking early medical attention when symptoms appear.

Empirical evidence suggests that mass media exposure positively influences health knowledge and behavior. For instance, studies in sub-Saharan Africa have demonstrated that radio campaigns increase awareness of malaria transmission and preventive practices, while television and social media further reinforce health messages and encourage community engagement (Wakefield, Loken, & Hornik, 2010; Aregbeshola & Khan, 2018). In Nigeria, research indicates that households regularly exposed to radio and television malaria messages exhibit higher knowledge of ITN use, treatment-seeking behaviors, and environmental sanitation practices compared to households with limited media exposure. However, much of this evidence is fragmented, with limited studies focusing on northeastern states such as Yobe, where sociocultural factors, access to media, and literacy levels may affect the effectiveness of mass media campaigns.

Yobe State, located in northeastern Nigeria, presents a unique context for studying the impact of mass media on malaria knowledge. The state is characterized by a mix of rural and urban communities, varying levels of educational attainment, and significant socioeconomic disparities. Rural households often face barriers such as poor infrastructure, limited electricity access, and inadequate healthcare services, which affect both exposure to mass media and the implementation of malaria prevention measures. Urban residents, by contrast, may have greater access to television and social media, but may still be influenced by misinformation or cultural beliefs regarding malaria causes and treatment. Understanding the differential impact of various media channels on knowledge and awareness across these diverse populations is critical for designing tailored interventions that maximize reach and effectiveness.

Given the persistent malaria burden in Yobe State, assessing the role of mass media in shaping knowledge and awareness is essential for improving public health outcomes. This study seeks to examine the level of exposure to different forms of mass media, evaluate residents' knowledge of malaria prevention, and analyze the relationship between media exposure and knowledge levels. Specifically, the study aims to answer key questions: To what extent do radio, television, and social media contribute to public knowledge of malaria prevention? How do sociodemographic factors such as education and income influence the effectiveness of media messages? Are there gaps in knowledge and awareness that require targeted interventions? By addressing these questions, the study provides evidence-based insights for policymakers, health educators, and public health practitioners seeking to enhance malaria prevention campaigns in Yobe State.

The objectives of this study are:

1. To examine the level of exposure to mass media

among residents of Yobe State.

2. To assess the level of knowledge and awareness of malaria prevention.

3. To evaluate the relationship between mass media exposure and knowledge of malaria prevention.

4. To provide recommendations for enhancing malaria awareness campaigns in both rural and urban communities.

In conclusion, improving public knowledge and awareness of malaria prevention is a critical component of reducing malaria incidence in Nigeria. Mass media represents a strategic and cost-effective mechanism for disseminating health information, particularly when integrated with community outreach programs. By exploring the relationship between media exposure and malaria knowledge in Yobe State, this study aims to contribute to the design of effective communication strategies that empower residents to adopt preventive behaviors, seek timely treatment, and ultimately reduce the burden of malaria. Understanding these dynamics is especially important in contexts where sociocultural, economic, and infrastructural factors shape the reach and impact of mass media, thereby influencing public health outcomes.

LITERATURE REVIEW

Concept of Mass Media in Health Communication

Mass media refers to channels of communication capable of reaching large audiences simultaneously, encompassing traditional forms such as radio, television, and newspapers, as well as digital platforms including websites, social media, and mobile applications. In the context of health communication, mass media serves as a critical tool for disseminating information about disease prevention, health promotion, and behavioral change. According to Wakefield, Loken, and Hornik (2010), mass media interventions are particularly valuable in resource-limited settings where direct interpersonal communication with healthcare professionals may be constrained. By providing timely, consistent, and culturally appropriate information, mass media can increase public awareness, improve health literacy, and encourage preventive practices.

Health communication through mass media is considered cost-effective and efficient in reaching dispersed populations. In developing countries like Nigeria, radio remains the most accessible medium, particularly in rural areas where literacy rates are low and electricity supply is irregular. Radio programs can broadcast messages in local languages, ensuring comprehension and cultural relevance. Television offers visual demonstrations of preventive behaviors, such as the proper use of insecticide-treated nets (ITNs) or environmental sanitation measures. Digital media and social networks, increasingly accessed by urban and younger populations, allow for interactive engagement, enabling users to share information, ask questions, and participate in online health campaigns. The integration of multiple media channels enhances message reinforcement and expands the reach of public health interventions (Hornik, 2002).

Malaria Knowledge and Prevention

Malaria is a mosquito-borne infectious disease caused by *Plasmodium* parasites, transmitted primarily through the bite of infected *Anopheles* mosquitoes. Nigeria remains one of the countries with the highest malaria burden globally, accounting for approximately 27% of malaria cases worldwide (WHO, 2023). Malaria manifests with symptoms such as fever, chills, headache, nausea, and, in severe cases, anemia, convulsions, and death. Effective prevention strategies are critical for reducing morbidity and mortality. Core preventive measures include the use of insecticide-treated nets (ITNs), indoor residual spraying (IRS), environmental management to eliminate mosquito breeding sites, chemoprophylaxis for vulnerable populations, and prompt diagnosis and treatment at healthcare facilities (Aregbeshola & Khan, 2018).

Knowledge and awareness of malaria prevention significantly influence individual and community participation in preventive behaviors. Studies have consistently shown that households with higher awareness of malaria transmission and prevention are more likely to adopt ITNs, engage in environmental sanitation, and seek timely medical attention (Ojo *et al.*, 2019). Conversely, limited knowledge contributes to delayed treatment, incorrect use of preventive tools, and reliance on informal or traditional methods that may be ineffective. In rural communities, sociocultural beliefs also affect malaria perceptions, with some residents attributing the disease to spiritual causes rather than mosquito transmission. This underscores the need for targeted health communication strategies that combine biomedical knowledge with culturally sensitive messaging.

Impact of Media on Public Health Awareness

Empirical studies across sub-Saharan Africa indicate that mass media plays a pivotal role in enhancing knowledge, shaping attitudes, and motivating preventive behaviors. Radio programs have been particularly effective in rural areas due to high accessibility and adaptability to local languages and dialects. A study by Aregbeshola and Khan (2018) found that radio campaigns significantly increased household knowledge of malaria transmission and the correct use of ITNs in rural Nigeria. Television campaigns provide visual demonstrations of preventive practices, reinforcing verbal messages and increasing comprehension among populations with low literacy levels. Social media and digital platforms are increasingly leveraged for interactive campaigns, offering opportunities for feedback, engagement, and peer-to-peer information dissemination.

The effectiveness of mass media campaigns in health promotion depends on several factors, including accessibility, frequency of exposure, credibility of the media source, and cultural appropriateness of the messages. Repeated exposure to health messages has been shown to strengthen knowledge retention and encourage behavioral adoption (Wakefield *et al.*, 2010). Trust in the information source is equally critical; messages delivered

by government health agencies, reputable NGOs, or local community leaders are more likely to be perceived as credible and acted upon. Conversely, misinformation, poorly designed campaigns, or culturally insensitive messaging can reduce effectiveness and even promote harmful practices.

In Nigeria, the Federal Ministry of Health and international partners have implemented a range of malaria-focused mass media campaigns. Radio jingles, television advertisements, and social media posts frequently educate the public on ITN use, environmental sanitation, and the importance of early treatment-seeking. Evaluations of these interventions indicate that media exposure correlates positively with knowledge of malaria prevention strategies, uptake of ITNs, and prompt health facility visits (Onwujekwe *et al.*, 2019). However, the degree of impact varies by region, largely influenced by media accessibility, socioeconomic status, literacy, and urban-rural disparities. In Yobe State, limited empirical studies have explored the relationship between media exposure and malaria knowledge, highlighting a research gap that this study seeks to address.

Media Exposure and Rural Populations

Rural populations often face unique challenges that limit the effectiveness of mass media campaigns. These include limited access to electricity, fewer media outlets, lower literacy rates, and cultural barriers that influence message reception. Radio remains the most viable communication channel in these settings, given its affordability, wide coverage, and ability to broadcast in local languages. Community radio stations have been particularly effective in delivering culturally appropriate health messages, engaging local leaders, and encouraging preventive behaviors (Nwoke *et al.*, 2020). Traditional media can be complemented by interpersonal communication strategies, such as community health workers and village health committees, to reinforce messages and facilitate understanding.

In urban areas, television and digital media have greater penetration. Television allows for audio-visual demonstrations of preventive practices, while social media platforms enable interactive campaigns, dissemination of infographics, videos, and real-time Q&A sessions. Young people and urban residents often rely on social media for health information, making it a valuable platform for increasing malaria knowledge and promoting preventive behaviors (Adepoju *et al.*, 2021). However, digital media campaigns must consider issues of misinformation, unequal internet access, and the digital literacy gap, which may limit their reach and effectiveness.

Theoretical Framework: Health Belief Model (HBM)

This study is anchored on the Health Belief Model (HBM), which provides a robust framework for understanding health-related decision-making and behavior. According to Rosenstock (1974), individuals are more likely to engage in preventive health behaviors when they:

1. Perceive themselves as susceptible to a disease (perceived susceptibility).
2. Recognize the severity of the disease and its consequences (perceived severity).
3. Believe that the benefits of preventive actions outweigh potential barriers (perceived benefits vs. perceived barriers).
4. Encounter cues to action that prompt behavior, such as health messages, campaigns, or social influence.
5. Have confidence in their ability to successfully implement preventive measures (self-efficacy).

Mass media functions as a critical cue to action within the HBM framework, providing knowledge about malaria risks, emphasizing the benefits of preventive measures, and motivating individuals to adopt protective behaviors. By delivering repeated and culturally tailored messages, media campaigns enhance perceived susceptibility, clarify the severity of malaria, and provide actionable steps for prevention. The model also explains why some individuals fail to adopt preventive behaviors despite exposure; perceived barriers such as cost, accessibility, or cultural beliefs may impede behavior change, highlighting the need for integrated communication strategies.

Empirical Evidence on Mass Media and Malaria Knowledge

Several studies have examined the relationship between mass media exposure and malaria knowledge in Nigeria and other sub-Saharan African countries. Aregbeshola and Khan (2018) found that households exposed to radio and television campaigns were significantly more likely to own ITNs and use them consistently. Similarly, Onwujekwe *et al.* (2019) reported that repeated exposure to media messages increased awareness of malaria symptoms, encouraged early treatment-seeking behavior, and reduced reliance on informal treatment methods. Adepoju *et al.* (2021) highlighted the emerging role of social media in urban areas, where interactive campaigns allow users to ask questions, share experiences, and reinforce preventive knowledge.

Studies also indicate that socioeconomic factors moderate the impact of mass media campaigns. Households with higher income and education levels are more likely to access and act upon media messages, whereas lower-income and less-educated households may face barriers in interpreting or applying health information. Rural populations may also experience disparities in media access, reinforcing the need for tailored, context-specific communication strategies that consider literacy, cultural beliefs, and infrastructure limitations (Nwoke *et al.*, 2020).

Knowledge Gaps and Justification for the Study

While existing literature confirms the effectiveness of mass media in improving malaria knowledge and preventive behaviors, limited studies focus on northeastern Nigeria, particularly Yobe State. The region's unique sociocultural, economic, and infrastructural characteristics such as rural dominance, low literacy rates, and limited access

to healthcare may influence how mass media impacts knowledge and awareness. There is a need for context-specific research to understand the effectiveness of different media channels, the reach of health messages, and the barriers that limit preventive behavior adoption. This study addresses this gap by examining the relationship between mass media exposure and knowledge of malaria prevention among residents of Yobe State, providing insights for targeted health communication interventions.

Summary

In summary, mass media serves as a powerful tool for health promotion and disease prevention, offering cost-effective channels to disseminate information, raise awareness, and encourage behavioral change. In the context of malaria prevention, radio, television, and social media campaigns have been shown to enhance knowledge, promote ITN use, and encourage early treatment-seeking. The effectiveness of media campaigns is influenced by accessibility, frequency of exposure, trust, and sociocultural factors. Anchored on the Health Belief Model, this study conceptualizes mass media as a cue to action that enhances perceived susceptibility, severity, and benefits of preventive behaviors while reducing barriers to action. Despite growing evidence of media effectiveness in malaria prevention, there remains a paucity of research in northeastern Nigeria, particularly in Yobe State. This study seeks to fill this gap by assessing the impact of mass media on knowledge and awareness of malaria prevention, providing evidence for policymakers and health educators to optimize media-based interventions.

MATERIALS AND METHODS

Research Design

This study adopted a cross-sectional survey research design, which is appropriate for examining the relationships between exposure to mass media and knowledge and awareness of malaria prevention at a single point in time. Cross-sectional surveys are widely used in public health research to assess patterns of behavior, knowledge, and attitudes across populations, particularly in resource-limited settings (Creswell, 2014). The design allows for the collection of quantitative data from a representative sample, enabling the identification of correlations and potential predictors of health-related outcomes. In the context of this study, the cross-sectional approach facilitated an assessment of how exposure to various media channels, including radio, television, and social media, influences individuals' knowledge and awareness of malaria preventive measures.

This design is advantageous for its efficiency, cost-effectiveness, and ability to provide a snapshot of the current state of malaria knowledge among residents of Yobe State. It also allows for the collection of data across diverse demographic groups, including different age categories, educational levels, and occupational statuses, which is essential for understanding variations

in media influence. However, it is acknowledged that this design does not establish causality; instead, it highlights associations and trends that can inform policy and intervention strategies.

Population of the Study

The study population comprised adult residents of selected rural and urban communities within three purposively selected local government areas (LGAs) of Yobe State, Nigeria. Inclusion criteria required participants to be at least 18 years of age and to have resided in the community for at least one year, ensuring familiarity with local health communication channels and exposure to media campaigns. Both genders were included, and participants represented a range of educational backgrounds and occupations to capture the heterogeneity of media access and health knowledge.

Yobe State, located in northeastern Nigeria, has a high malaria prevalence, particularly in rural areas with limited access to healthcare infrastructure. The study targeted communities with varying levels of malaria incidence to ensure that findings reflected both high-risk and moderate-risk areas. By including urban and rural populations, the study also examined differences in media exposure, as urban residents are generally more likely to access television and social media, whereas rural residents primarily rely on radio for information.

Sample Size

The sample size was determined using Cochran's formula for sample size calculation, which provides a statistically valid estimate for proportions in large populations. Using a confidence level of 95%, a margin of error of 5%, and an estimated proportion of 50% (to account for maximum variability), a total of 300 respondents were deemed sufficient to ensure representativeness and statistical power for logistic regression analysis (Cochran, 1977). This sample size allowed for stratification by LGA, community, and household, ensuring that both rural and urban populations were adequately represented.

Sampling Technique

A multistage sampling technique was employed to ensure systematic selection of respondents and representation across different communities:

Selection of LGAs

Three LGA selected purposively based on population density, malaria prevalence, and accessibility served as the first stage of sampling. Purposive selection ensured that the study focused on areas most relevant to malaria control interventions.

Selection of Communities

Within each LGA, two communities were randomly selected using simple random sampling. This stage ensured that variability across communities, including differences in media accessibility and malaria knowledge, was captured.

Selection of Households and Respondents

Households within each selected community were identified through systematic random sampling, and one eligible adult per household was interviewed. Systematic selection involved choosing every *n*th household from a predetermined starting point. In households with multiple eligible adults, one participant was selected randomly to avoid selection bias.

This multistage approach enhanced representativeness, minimized sampling error, and allowed for efficient allocation of research resources across a geographically dispersed population.

Data Collection

Data were collected using a structured questionnaire, developed based on a comprehensive review of relevant literature on malaria prevention, mass media, and health communication (Hornik, 2002; Aregbeshola & Khan, 2018). The questionnaire comprised four sections:

Demographic Characteristics

Captured respondents' age, gender, educational attainment, occupation, and household income. These variables provided contextual information for understanding variations in media access and malaria knowledge.

Exposure to Mass Media

Assessed the frequency, type, and duration of media exposure. Respondents were asked how often they listened to radio programs, watched television broadcasts, and accessed social media platforms for health-related information. Frequency was categorized as daily, weekly, occasionally, or never.

Knowledge of Malaria

Included questions on malaria transmission, symptoms, high-risk groups, and preventive measures such as the use of insecticide-treated nets, indoor residual spraying, environmental sanitation, and prompt treatment-seeking behavior. Correct responses were coded numerically to generate an overall knowledge score for each respondent.

Awareness of Malaria Prevention Campaigns

Examined respondents' recall of health messages, understanding of campaign content, and behavioral changes adopted as a result of media exposure.

The questionnaire was administered face-to-face by trained research assistants fluent in English and Hausa, ensuring that language barriers did not affect data quality. Participants provided informed consent prior to the interview, and the purpose of the study, confidentiality assurances, and voluntary participation were explained.

Validity and Reliability

To ensure content validity, the questionnaire was reviewed by experts in public health, health communication, and epidemiology. Pretesting was conducted among 20 respondents from communities outside the study area to assess clarity, comprehension, and cultural relevance.

Feedback from the pretest informed minor revisions to wording and response options. Reliability was evaluated using Cronbach's alpha to measure internal consistency of items related to malaria knowledge and media exposure. A Cronbach's alpha coefficient of 0.83 was obtained, indicating high reliability and ensuring that the instrument consistently measured the intended constructs.

Model Specification

A logistic regression model was employed to examine the relationship between mass media exposure and knowledge of malaria prevention. The model was specified as follows:

Where:

- Knowledge = dichotomous outcome (adequate vs. inadequate knowledge of malaria prevention)

$$Knowledge = \beta_0 + \beta_1 Radio + \beta_2 Television + \beta_3 SocialMedia + \beta_4 Education + \beta_5 Income + \varepsilon$$

- Radio = frequency of listening to radio for health information
- Television = frequency of watching TV for health-related content
- SocialMedia = frequency of accessing social media for health information
- Education = highest level of educational attainment
- Income = monthly household income
- β_0 = intercept, β_1 – β_5 = coefficients, ε = error term

This model allows for the assessment of the independent contributions of different media channels while controlling for socioeconomic variables. Logistic regression was chosen because the dependent variable is binary, indicating whether respondents have adequate knowledge of malaria prevention or not.

Data Analysis

Data were coded and analyzed using SPSS version 28. Descriptive statistics, including frequencies, percentages, means, and standard deviations, summarized respondents' demographic characteristics, media exposure, and malaria knowledge levels.

Inferential analysis involved logistic regression to test the relationship between exposure to radio, television, and social media and knowledge of malaria prevention. The odds ratios generated provided insight into the likelihood that individuals with higher media exposure possessed adequate knowledge, controlling for education and income. Statistical significance was set at $p < 0.05$, and confidence intervals were reported to assess the precision

of estimates.

Additionally, cross-tabulations were conducted to examine differences in media exposure and malaria knowledge across gender, age, and urban-rural residence. These analyses allowed for the identification of demographic factors that moderate the impact of mass media on health knowledge.

Ethical Considerations

Ethical approval for the study was obtained from the institutional review board of the host university. All participants were informed about the objectives of the study, assured of confidentiality, and informed that participation was voluntary. No personal identifiers were collected, and data were stored securely to prevent unauthorized access. Respondents provided written or verbal consent prior to participation.

Ethical principles of beneficence, respect for persons, and justice were observed throughout the research process. The study ensured that participants were not exposed to harm, that information was obtained respectfully, and that the findings could contribute to improving public health interventions and malaria prevention strategies in Yobe State.

RESULTS AND DISCUSSION

Results

The majority of respondents were aged 30–45 years. Educational attainment was low, indicating potential gaps in understanding malaria prevention.

Table 1: Demographic Characteristics of Respondents

Variable	Frequency	Percentage
Male	160	53%
Female	140	47%
Age 18–29	80	27%
Age 30–45	150	50%
Age 46–60	70	23%
No Formal Education	90	30%
Primary Education	100	33%
Secondary Education	80	27%
Tertiary Education	30	10%

Table 2: Exposure to Mass Media

Media Type	Frequently Exposed	Occasionally	Rarely/Never
Radio	180	80	40
Television	150	90	60
Social Media	120	70	110

Radio and television were the most accessed sources of health information. Social media usage was limited to younger respondents. Awareness of malaria symptoms was high, but knowledge

Table 3: Knowledge of Malaria Prevention

Knowledge Item	Correct Response	Percentage
Recognizes malaria symptoms	230	77%
Knows ITN use prevents malaria	200	67%
Aware of environmental sanitation	180	60%
Seeks early treatment at health centers	160	53%

of preventive measures and timely treatment was moderate. Exposure to radio and television significantly increased knowledge of malaria prevention. Social media had a smaller but significant effect. Higher education and income also positively influenced malaria knowledge.

Table 4: Logistic Regression – Media Exposure and Knowledge

Variable	Coefficient (B)	Std. Error	t-value	p-value
Constant	0.95	0.32	2.97	0.003
Radio	0.42	0.18	2.33	0.020
Television	0.35	0.16	2.19	0.030
Social Media	0.28	0.14	2.00	0.046
Education	0.40	0.15	2.67	0.008
Income	0.32	0.12	2.67	0.008

Discussion

The findings indicate that mass media exposure is positively associated with knowledge and awareness of malaria prevention. Radio remains the most accessible and influential source of health information, consistent with rural contexts where electricity and internet access may be limited. Television also plays a significant role, particularly among households with access to electricity. Social media contributes mainly among younger and more educated respondents.

The study also confirms that socioeconomic factors such as education and income enhance the effectiveness of media campaigns, as individuals with higher literacy levels are better able to understand and apply health information. This aligns with the Health Belief Model, suggesting that cues to action (media messages) increase perceived knowledge and motivate preventive behaviors. Despite high awareness of malaria symptoms, knowledge of preventive practices like ITN use, environmental sanitation, and early treatment seeking was moderate, highlighting gaps in public health communication. Tailored media campaigns that combine mass media with community-based interventions could improve the translation of knowledge into action.

CONCLUSION

Mass media plays a crucial role in shaping knowledge and awareness of malaria prevention in Yobe State, Nigeria. Radio and television are the most effective channels, while social media is emerging as a complementary platform. Higher education and income levels enhance individuals' capacity to benefit from media campaigns. The study emphasizes the need for integrated communication strategies to increase the adoption of preventive behaviors and reduce malaria incidence.

Recommendations

- Expand Mass Media Campaigns:** Increase the frequency and reach of malaria prevention programs on radio and television, particularly targeting rural areas.
- Leverage Social Media:** Use digital platforms to reach younger populations with interactive and engaging health messages.
- Integrate Community Health Education:** Combine mass media campaigns with community outreach and demonstrations to reinforce preventive behaviors.
- Focus on Education and Literacy:** Enhance health education in schools and adult literacy programs to improve comprehension of malaria messages.

5. **Monitor Campaign Effectiveness:** Conduct periodic assessments to evaluate the impact of media campaigns on knowledge, attitudes, and practices related to malaria prevention.

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