

The Use of Indigenous Communication Media for Children's Vaccination and Immunization Promotion in Rural Communities of Abia State, Nigeria

Amarachi Precious Udochi-Nwachukwu, Samuel Oluwasogo Dada¹, Mathew Nyashanu¹

Department of Communication, Rural Access and Agricultural Marketing Project Office, Umuahia, Abia State, Nigeria, ¹Department of Public Health, School of Social Sciences, Institute of Health and Allied Professions, Nottingham Trent University, Nottingham, United Kingdom

Abstract

Background: In Nigeria, child survival is threatened by vaccine-preventable diseases, and routine immunization services do not reach many children, especially those living in rural communities. The non-use of indigenous communication has been identified as one of the barriers preventing immunization coverage and acceptance by mothers of children. **Aims and Objectives:** This study investigated the use of indigenous communication media for immunization promotion among mothers in rural communities of Abia State, Nigeria. **Materials and Methods:** Using a descriptive survey design, the study was anchored on the development communication theory. A multistage sampling procedure was used to select 394 participants across 10 rural communities in Abia State. A validated closed-ended questionnaire was used for the data collection and data were analyzed using the descriptive and inferential statistics at $P < 0.05$. **Results:** The findings showed that 53.8%, 25.6%, and 20.6% of the participants averred that indigenous communication media played the role of immunization information dissemination, reminder, and reinforcement, respectively. Most (73.6%) of the respondents opined that indigenous communication media are highly relevant in informing rural dwellers about immunization programs while 50.0% believed that the use of traditional media should complement health workers' efforts during health promotion and education on vaccination and immunization. The town crier was the most utilized indigenous communication media (89.3%). There was a statistically significant relationship between the use of indigenous media and vaccination/immunization communication ($P = 0.001$). **Conclusion:** This study revealed that indigenous communication media is crucial for the promotion of children's vaccination and immunization in rural communities. It is important that for effective health promotion efforts toward reaching rural dwellers, the use of indigenous communication media should be encouraged.

Keywords: Children, immunization, indigenous communication, media, mothers, vaccination

INTRODUCTION

In any health promotion and education program, the medium of communication is as important as the content of the communication. According to the Food and Agriculture Organization of the United Nations,^[1] "Communication is a basic element of the indigenous peoples as it allows the poorest communities to access knowledge and information, reaffirms cultural and social identities, and facilitates intercultural sharing." Communication enhances the indigenous peoples' community participation in local and national decision-making. Indigenous communication is however the tool used by the common people, especially the rural dwellers for the purpose of development. The apposite usage of indigenous communication media can lead to successful development

programs, this is because "the audience in the indigenous channels of community communication is known to each other, they freely interact, orient their actions to each other, and have organic solidarity."^[2,3]

Address for correspondence: Mr. Samuel Oluwasogo Dada, School of Social Sciences, Institute of Health and Allied Profession, Nottingham Trent University, 50 Shakespeare Street, Nottingham NG1 4FQ, United Kingdom.
E-mail: Samuel.dada2021@my.ntu.ac.uk

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Despite the enormous investment of financial resources in immunization programs by many developing countries including Nigeria, most infant and child mortality have been attributed largely to vaccine-preventable diseases (VPDs).^[4] This has further been supported by UNICEF reports of 2023 which showed that up to 12.7 million African children missed the opportunity for vaccination, and as a result, they remain exposed to death and disability.^[5] A study showed that out of the 14 million deaths of under 5-year children globally, up to 95% of deaths occurred in developing countries and 70% of these deaths are attributable to VPDs.^[6] According to the UNICEF report,^[5] mothers are recognized as the primary caregivers of children, and many face obstacles in getting information and using health services because of barriers in communication from health-care workers. Based on a previous study,^[7] traditional media are satisfactory in serving the rural people in meeting their need for information about local people, events, and health, thus, using traditional or indigenous language for health promotion is crucial.

Since immunization is one of the most cost-effective public health interventions to date, saving millions of lives and protecting countless children from illness and disability,^[8] giving immunization to children is a way of protecting them from communicable or killer diseases during infancy or childhood and can be encouraged through effective communication of its importance to mothers, especially in rural areas with limited access to health-care services.

According to the report by Lunenburg,^[9] “the Sender and the Receiver” are the two common elements in every communication exchange. The sender has a need to convey an idea or concept to others. The message is sent through a medium or channel, which is the carrier of the communication. The medium can be a face-to-face conversation, telephone call, E-mail or written report, posters, billboards, or other online media. The receiver decodes the received message into meaningful information. Therefore, if this process is not done properly and adequately, effective communication may not take place. When information is understood as the sender intended and is sent through the right channel, effective communication can be said to have been achieved.^[10] In health promotion and education, especially among the general population, effective communication is crucial in achieving any set objectives for behavioral change. According to a study by Goldstein *et al.*,^[11] health communication is an evolving field and there is evidence that communication can be an effective tool if utilized in a carefully planned and integrated strategy to influence the behaviors of populations on several health issues, most especially communicable diseases.

“Indigenous communication often does not take place through newspapers, radio, or television but occurs within families, at meetings of village organizations, in the marketplace, or at the well, which could be interpersonal, oral rather than written, controlled locally rather than by outsiders and uses no or low levels of technology.” It is effective for health

promotion.^[12,13] Because of the impact of the use of indigenous communication, it has been opined to be useful for health promotion and education activities. This study, therefore, evaluates the indigenous communication media in use in rural areas for the purpose of immunization coverage to reduce the high prevalence of infant and child mortality. Findings were aimed to aid health-care workers and development communication (DEVCOM) practitioners to design and implement communication strategies that will lead to improved immunization outcomes for rural dwellers. The study made use of the DEVCOM theory for the purpose of data collection. The theory exerts a holistic communication effort, approach, or action designed to mobilize people toward active participation in programs aimed at achieving improved physical, sociocultural, political, and economic environments for the benefit of human in society.^[14] The theory emphasized the importance of the use of all forms of communication in reporting, publicizing, and promoting development at all levels of society.

METHODOLOGY

Research design

This study adopted a descriptive, cross-sectional survey design using a structured self-administered questionnaire. The design was useful for the data collection to achieve the research objectives. This procedure was chosen because descriptive research reveals the situation at hand, serving as a starting point in assessing the situation and as a prerequisite for drawing conclusions in research.

Study area

This study was conducted in Abia State, Nigeria. It occupies a landmass of 6833.77 km².^[15] According to the National Population Commission of Nigeria, Abia State has a total population of about three million people with an average population density of 486 persons/km². The state is in the rainforest zone of Nigeria with a temperature of 20°C–30°C. Abia State is made up of 17 local government areas (LGAs). The population is predominantly rural except Aba and Umuahia, which are the major cities.^[16] The study was carried out in the Obingwa LGA of the state which hosts a total of about 250 rural communities.

Study population

This includes men and women within 10 communities in Obingwa LGA. The communities where participants were sampled include Osaa, Umuokahia, Ovom Ama Asaa, Abayi Ohanze, Obeala, Ehere, Umuobiakwa Ohanze, Agburuike Isiugwu, Umuocha, and Ntigha Umuaro.

Sample size determination

The method of determination of sample size in applied statistic research by Singh and Masuku^[17] was adopted for this study. The total population of the communities under the study was estimated at 91,284. The sample size determination for ±5% precision level where confidence level is 95% is presented in Table 1.

Table 1: Sample size determination

Size of population	Sample size for precision of ±5%
500	222
1000	286
2000	333
5000	370
10,000	385
15,000	390
20,000	392
50,000	397
100,000	398
>100,000	400

Source: Singh and Masuku^[17]

Table 2: Sociodemographic characteristics of respondents (n=394)

Characteristics	Frequency, n (%)
Age (years)	
≤20	73 (18.5)
21–30	134 (34.0)
31–40	100 (25.4)
Above 40	87 (22.1)
Gender	
Male	172 (43.7)
Female	222 (56.3)
Marital status	
Married	147 (37.3)
Separated	52 (13.2)
Single	120 (30.5)
Divorced	36 (9.1)
Widowed	39 (9.9)
Education status	
No formal education	15 (3.8)
At least secondary education	258 (65.5)
Tertiary education	121 (30.7)
Occupation	
Farming	101 (25.6)
Timber contractor	58 (14.7)
Civil servant	111 (28.2)
Hunting	32 (8.1)
Others	92 (23.4)

Therefore, since the total population of the selected is <100,000 (91,284), based on the sample size table by Singh and Masuku^[17] for the precision level at 95% confidence level, the sample size for this study was estimated to be 398.

Sampling technique

A multistage sampling technique was used to randomly select the respondents for this study. This was used in the collection of data among community members across the 10 communities within the LGA of the study. These stages included:

Stage 1

The 10 communities in the LGA were purposively selected for this study.

Stage 2

Proportionate sampling was adopted to determine the number of community members to be used in each community.

Proportionate Sampling =

$$\frac{\text{Community Population}}{\text{Total population in the LGA}} \times \text{Sample Size}$$

Stage 3

Respondents were selected across the 10 communities based on the sample size and the required number needed per community.

Stage 4

Simple random sampling was used to select the actual participant required in each community.

Data collection and procedure

Primary data were collected using a questionnaire that was administered to community members (both males and females) from different socioeconomic classes, educational backgrounds, and ages across 10 communities in Obingwa LGA of Abia State. Information on available indigenous communication media in use, awareness about immunization and vaccination, the relevance, effectiveness, and reliability of media in informing the people about immunization programs, and the possible barriers to the effective utilization of indigenous communication for immunization were obtained.

Structured questionnaires were administered to the respondents using a direct contact approach. This approach enabled the researchers to get direct and objective responses, reducing the incidence of biased responses and unwillingness on the part of respondents as they were persuaded to comply. The purpose of the research was clearly explained to the respondents to gain their support. They were encouraged to truthfully respond to questions and to fill questionnaire completely. However, before administering the questionnaires, the researchers obtained permission from the traditional rulers/village heads of the communities to carry out research in those communities.

Validity and reliability

The questionnaire was subjected to face, content, and construct validity through an adequate review of relevant literature and subjecting the first draft to peer and expert review. To ensure that the instrument is consistent in measuring what it purports to measure, the instrument was administered in a pilot study on a sample of 50 randomly selected respondents having similar characteristics to the sample used in the study. A Cronbach's alpha of 0.864 was obtained, indicating that the items on the questionnaire were internally consistent with one another.

Data analysis

After data collection, the questionnaires were sorted for completeness before coding into the Statistical Package for the Social Sciences (SPSS) Version 27.0. (Armonk, New York) software that was used for the quantitative data analysis.

Descriptive and inferential statistics at $P < 0.05$ were carried out. Results were presented in tables.

Ethical consideration

Before data collection, an information sheet was provided for the participants with details about the research. Informed consent was obtained from all study participants. The principles of research ethics which include respect for person, beneficence, nonmaleficence, and justice were ensured in this study. Confidentiality of responses was ensured as there was no form of identifier in the data collection instrument. To further ensure the study complied with the national and state guidelines on research involving human participants, ethical clearance was obtained from Abia State Health Research Ethics Committee.

RESULTS

Overall, after sorting and removing incomplete responses, a total of 394 filled questionnaires were used for data analysis which accounted for a 98.9% response rate of the calculated sample size. Therefore, a total of 394 community members in the selected LGA of Abia State participated in the study. The mean age was 27 ± 3.8 with the majority (56.3%) being female while most (65.5%) of the participants have at least secondary education (See table 2).

The respondents' awareness and views about immunization are presented in Table 3. Most (92.4%) of the participants were aware of immunization and 88.8% of them were willing to advise other people on immunization.

Table 4 presents the indigenous communication media use in the study area. These media used for the process of vaccination and immunization promotion include town crier (89.3%), talking drum (87.6%), marketplace (81.5%), and neighborhood network (73.4%) among others.

Respondent's Perception of indigenous communication media

The perception of respondents on the perceived role of indigenous communication is presented in Table 5. Respondents believed that indigenous communication is effective in information dissemination for health promotion services and most of the respondents (73.6%) believed that traditional communication is highly relevant for immunization promotion. Most of the respondents viewed that indigenous communication should complement mass media for health promotion.

The relationship between the effectiveness and the use of indigenous media in communicating vaccination and immunization information using Chi-square statistics is presented in Table 6. This shows a statistically significant relationship ($P = 0.001$, $\chi^2 = 45.291$, $df = 1$).

DISCUSSION

In general, these findings have revealed that a high percentage of indigenous communication media utilized among participants

Table 3: Respondent's awareness and views of immunization program (n=394)

Statements	Responses	n (%)
Heard of immunization before?	Yes	364 (92.4)
	No	30 (7.6)
Can you advise other people to participate in immunization exercise?	Yes	350 (88.8)
	No	44 (11.2)
Perception of immunization program	Control of VPDs	68 (17.3)
	The most effective way of staying healthy	130 (33.0)
	Control of VPDs for children only	90 (22.8)
	Control of preventable diseases and the most effective way of staying healthy	72 (18.3)
	No idea	34 (8.6)

VPDs: Vaccine-preventable diseases

Table 4: Indigenous communication media use in the study area (n=394)

Indigenous communication media*	Frequency, n (%)
Town crier	352 (89.3)
Roleplay	211 (53.5)
Church parish minister	301 (76.4)
Neighborhood network	289 (73.4)
Talking drum	345 (87.6)
Market place	321 (81.5)
Groups and association meetings	232 (58.9)
Divination and proverbs	186 (47.2)

*Multiple response present

Table 5: Distribution of respondent's perception of indigenous communication (n=394)

Variables	n (%)
Perceived role (s) of traditional communication in health services promotion	
Information dissemination	212 (53.8)
Information reminder	101 (25.6)
Information reinforcement	81 (20.6)
Level of traditional communication relevance in immunization programs promotion	
Highly relevant	290 (73.6)
Less relevant	24 (6.1)
Irrelevant	80 (20.3)
Perceived approach (es) that traditional communication should take on health issues	
Complement mass media activities	197 (50.0)
Sole channel of health information communication	113 (28.7)
Dominate mass media programs	84 (21.3)
Comparison of traditional media content with health worker's messages on immunization	
Highly similar	201 (51.0)
Most similar	118 (29.9)
Similar	41 (10.4)
Less similar	25 (6.3)
Not similar	9 (2.3)

Table 6: Relationship between use of indigenous media and vaccination and immunization communication

	Value	df	Asymptotic significance (two-sided)	Exact significant (two-sided)	Exact significant (one-sided)
Pearson Chi-square	45.291	1	0.001		
Continuity correction	0.160	1	0.689		
Likelihood ratio	0.290	1	0.590		
Fisher's exact test				0.003	0.001
Number of valid cases	394				

for immunization messages includes town criers, role play, church parish ministers, neighborhood networks, marketplace gatherings, group meetings, and talking drums. The fact that most of the respondents were aware of immunization programs in their community was indicative of the effectiveness of these traditional communication channels for health promotion and education. These findings supported Oku *et al.*^[18] who found in their study that effective communication with parents is crucial in efforts to conquer impediments to childhood vaccination, tackle vaccine hesitancy, and improve vaccination coverage. Hence, health workers should be able to provide information to parents and other caregivers and support them in reaching decisions about vaccinating their children through indigenous communication channels. It also made it pertinent to state that health promotion activities require the use of appropriate media to communicate effectively to the target audience. A study by Barik *et al.*^[19] has argued that the use of traditional media is effective for health promotion purposes of which immunization program is very significant. This means when appropriate information is passed to parents, especially mothers of infants, in a language they understand, and through an effective medium, they are more likely to adopt the information being passed across. In this case, when they present their children for vaccinations, infant and child mortality and morbidity are prevented, thereby reducing the national and global infant morbidity and mortality rate.

The results from this study have also corroborated the FAO^[1] report which averred that traditional communication is a basic element of indigenous peoples' self-determined development as it facilitates access to knowledge and information, reaffirms cultural and social identities and promotes intercultural sharing. It enhances the indigenous peoples' community participation in local and national decision-making and consequently plays a crucial role in child health development among other positive outcomes and also supported by these findings was the study by Ilusanya and Oladosun^[6] and Dada *et al.*^[20] which emphasized that the health of an individual is an important aspect of his life. Hence, full and uninterrupted access to health information is required to maintain a good life, and effective information is pertinent for supporting and encouraging preventive and

effective treatment practices that can enhance child health development. Evidence from this study is also in agreement with a study^[2] which found that health and other development programs can be effectively communicated using traditional media. This made it imperative to state that, traditional communication channels should aid information dissemination and reinforce health messages from health workers and other health departments. It should also be used to remind people of the health messages; they had earlier received. Through this, sustainable health services will be promoted. These facts have been expressly supported by the responses from this study.

Meanwhile, as much as this study has emphasized and identified talking drum, town crier, marketplace, church parish minister, and other traditional media as important communication media in use for immunization and vaccination campaigns in this study, it is also important to state that the use of modern communication media such as television, radio, newspapers, leaflets, posters, banners, and billboard^[21,22] in indigenous language should be used to complement the efforts of health-care workers and public health professionals in mobilizing community members for immunization and vaccination. This is in a bid to ensure effective communication.

Conclusively, from the data gathered, it is evident that indigenous communication media can play a significant role in the promotion of children's vaccination and immunization. This according to this study includes one or more information dissemination, reminder, and reinforcement. This study has also shown a significant relationship between the effectiveness of the use of indigenous media and communicating vaccination and immunization information. This, therefore, calls for stakeholders in the health-care system to encourage the use of local, indigenous, and traditional media for health education and promotion not only on vaccination and immunization program but also on all health issues, including various communicable and noncommunicable diseases.

CONCLUSION

This study revealed that to achieve maximum result, indigenous communication media is crucial for the promotion of children's vaccination and immunization in rural communities.

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Conflicts of interest

There are no conflicts of interest.

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