

USE OF MEDIA FOR PROMOTING PARTICIPATION IN CHILDHOOD IMMUNIZATION AMONG MOTHERS WITH CHILDREN UNDER FIVE YEARS (5) OF AGE IN JOS NORTH LOCAL GOVERNMENT AREAS (LGA) OF PLATEAU STATE, NIGERIA

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Abstract

Globally, millions of children die from vaccine-preventable diseases each year, especially in African countries. Media can help mobilize the population, inform, clear doubt and rapidly increase immunization coverage. This study aims at assessing the Use of Media for Promoting Participation in Childhood Immunization among Mothers with Children under Five Years (5) of Age. This is a descriptive cross-sectional study using survey method in assessing the Use of Media for Promoting Participation in Childhood Immunization among Mothers with Children under Five Years (5) of Age. Agenda Setting Theory was adopted. Four hundred (400) mothers of children of under five years of age were selected through random sampling using multistage sampling technique. Data generated was entered and analysed using Statistical Package for Social Science (SPSS) version 16.0 software. Findings showed that level of awareness through media (radio/television) is high with 74%, and there was a significant association between awareness of immunization through media (radio/television) and participation $p < 0.001$ in the study area. The authors therefore recommended that media programmes on childhood immunization should be in every quarterly scheduled programming of broadcast stations and not only when there is a flag up campaign. This will keep mothers abreast of the importance of immunization and educate new mothers on the need to immunize their children.

Keywords: Media, Participation, Immunization, Childhood and Awareness

Introduction

An estimated of 2 to 3 million lives are saved yearly through immunization, which is a vital and economical method of lowering childhood morbidity and death (WHO, 2020). The World Health Organisation (WHO) has set a target of 90% national coverage with three doses of the Diphtheria-Tetanus-Pertussis vaccine (DTP3), although vaccination rates in many LMICs are below this level. These include "missed dose"

children, who do not receive the whole schedule, and "zero-dose" children, who do not receive a single dose of any vaccine as part of the regular national immunisation schedule. WHO uses the completion of three doses of the DTP-containing vaccine before the age of 12 months as a proxy indication for the performance of routine immunisation programmes, whereas children who do not receive DTP1 are frequently used as a proxy

indicator for zero-dose children (Adeloye, Jacobs & Amuta, 2019).

In 2022, there were about 20.5 million under- and unvaccinated children in the world, with 14.3 million of them having received no immunisations at all. Immunisation is thought to have prevented 4.4 million deaths annually (United Nations International Children Emergency Fund (UNICEF), 2023). According to WHO (2023), 6.2 million children in Nigeria have not received a vaccination in the preceding five years. Sub-Saharan Africa continues to have the highest rates of child mortality in the world, with 74 (68–86) deaths per 1000 live births (WHO, 2021). Unvaccinated children are still susceptible to diseases that can be prevented by vaccination and are frequently already at a disadvantage because of poverty, violence, and limited access to essential medical care. Oladepo, Dipeolu, & Oladunni (2019) reported that 13.0% of children between the ages of 24 and 35 months had not received any immunisations.

Due to their weakened immune systems, children are particularly susceptible to paediatric illnesses. The most common causes of death for children under five are infectious illness attacks, meningitis, pneumonia, malaria, diarrhoea, pertussis, measles, and meningitis; these infections can be avoided with immunisation (Konwea, 2018). Immunisation is one of the health benefits that can most effectively lower the risk of childhood fatalities as well as one of the greatest ways to also shield children from diseases that can be avoided with vaccinations (WHO, 2017). The incidence of disabilities including mental retardation, hearing loss or deafness, meningitis, intellectual disability, and mobility impairment has significantly decreased as a result of vaccination against polio, rubella, measles, pneumonia, and diarrhea (Umoke, Nwalieji, Igwe, Umoke, Onwe, Nwazunku,

Nwafor, Chukwu, Eyo, Ugwu, Ogbonnaya, Okeke & Eke, 2021). Nonetheless, vaccination rates are poor in Nigeria, particularly in rural regions (WHO, 2017; Nigeria Demographic and Health Survey [NDHS], 2018). It is critical that children receive their first vaccine doses, as 80 % of children who receive at least one dose of any vaccine will receive at least one further vaccine, and two-thirds will complete the full schedule (WHO, 2020).

Communication is key in any given society. People rely on communication because it gives the most impoverished populations access to knowledge and information, reinforces social and cultural identities, and promotes cross-cultural exchange. The community's engagement in local and national decision-making is improved by communication (Udochi-Nwachukwu, Dada, & Nyashanu, 2023). The media, a communication medium, has the power to inform a great deal of mothers with children under five years of age about the advantages of childhood vaccinations for their health. Additionally, it can dispel myths regarding the detrimental effects of vaccination uptake rumours.

The media can help health workers reach a wider audience because face-to-face methods of communication often require too many human resources and only reach a small number of people in large, underserved areas. Both urban and rural residents have access to critical health information (World Social report, 2021). The media which include radio, television, newspapers, and magazines is an effective instrument for influencing target audiences to take up new habits or to be reminded of pertinent information. The media with its potentials can enlighten the public on immunisation campaigns.

Parental choice to vaccinate their children is a prerequisite for vaccination

uptake. One important factor impacting uptake is parental belief in the safety of childhood vaccinations. The media has been an essential tool for influencing people's values and objectives and for assisting individuals in understanding their surroundings. People's perceptions of health information can be greatly influenced by the media. The media has the ability to educate moms whose children are younger than five years old about the value of childhood vaccinations. In order to help them improve their health and wellness, people usually search for information about health-promoting medications to help them feel better (Catalan-Matamoros & PeafielSaiz, 2019). The traditional and digital media are important sources of information about public health education. The impact of the media on its audience has been the subject of numerous studies. In order to inform the creation of initiatives and regulations aimed at enhancing kid vaccination rates, numerous research have looked into the variables affecting the uptake of childhood vaccinations in Nigeria. Therefore, the primary focus of this study is on how the media can encourage mothers of children under the age of five (5) to get their children immunized through dissemination of correct information on immunization.

Statement of the Problem

According to Yaya, Uthman, Okonofua, & Bishwajit (2019), immunisation rates may be poor in Sub-Saharan Africa, particularly in West Africa, which has the highest infant and under-five death rates globally. Unrelated disturbances have put pressure on healthcare systems, resulting in 25 million children in 2021 not receiving vaccinations; of these 25 million, over 60% reside in ten nations, including Nigeria. Alternatively, by the end of 2021, 105 million newborns, or almost 81% of all infants globally, had gotten three doses of the DPT3/Penta-3 vaccination

against diphtheria, pertussis, and tetanus. Globally, vaccination rates have increased, but there is still a sizable variation in vaccine coverage between nations, according to Peck, Diallo, Nedelec, Sodha, & Wallace (2019). The measles vaccination has a 95% success rate in industrialised nations and a 74% success rate in African nations. The performance of DPT1 and DPT3 in European countries is 97 and 94%, respectively. Without vaccinations, infants and young children run the grave risk of developing vaccine-preventable illnesses that could have catastrophic consequences. This can include mortality (WHO, 2020), brain damage, seizures, hearing loss, pneumonia, hospitalisation, and amputation of a limb. Peck *et al.* (2019) reported that although vaccination rates have increased internationally, there is still a large variation in vaccination coverage between nations. DPT1 and DPT3 performance in European countries is 97 and 94%, respectively, but in African countries it is 84 and 76%. Similarly, the measles vaccine performance is 95% in industrialised countries and 74% in Africa. Infants and young children who are not immunised run the grave danger of developing life-threatening consequences from infections that can be prevented by vaccination. Amputation of a limb, hospitalisation, pneumonia, hearing loss, seizures, brain damage, and death are a few examples of this (WHO, 2020).

Due to the vulnerability and ongoing development of their immune systems, young children require higher doses of vaccinations. It is not as effective as older children's or adults' immune systems. As early as possible, infants and young children should be protected against dangerous diseases that can be prevented by vaccinations. Immunisations from an early age keep children safe. Disease prevention is always preferable than disease treatment (WHO, 2020). The media can be used as a communication tool to inform a lot

of mothers of small children about the health advantages of childhood immunisations. It can help dispel myths regarding the unfavourable effects of vaccination uptake rumours. There is a lot of disinformation about vaccinations, which could make people less confident in the efficacy and safety of vaccinations. The media can work with eminent public health organisations to promote reliable content, dispel false information, and demonetize anti-vaccine content. It is against this backdrop that this study set out to assess the level of childhood immunization in Jos North Local Government Area of Plateau state, the sources of awareness of childhood immunization by mothers of children under five years of age, participation level of mothers of children under five years of age and relationship between awareness through media and participation in childhood immunization among mothers with children under five years of age in Jos North LGAs of Plateau state, Nigeria.

Objectives of the Study

The objectives of the study were to:

1. To ascertain the level of awareness of childhood immunization in Jos North Local Government Area of Plateau state in Jos North Local Government Area of Plateau state.
2. The sources of awareness of childhood immunization by mothers of children under five years of age in Jos North Local Government Area of Plateau state.
3. Participation level of mothers of children under five years of age in Jos North Local Government Area of Plateau state.
4. Relationship between awareness through media and participation in childhood immunization among mothers with children under five

years of age in Jos North LGAs of Plateau state, Nigeria.

The Media as an important ally in Promoting Public Health

The media plays a critical influence in public health. The term media describes a range of methods of communication that have the ability to reach a wide audience, such as radio, television, newspapers, magazines, and social media. Media has become an increasingly important tool in public health efforts. Public health is greatly influenced by the media. The mass media has grown in significance as a vehicle for public health initiatives. Due to its effectiveness in quickly and efficiently reaching a large number of people, it has gained popularity in recent years (Mahli, 2023).

A valuable friend in any public health crisis is the media. It fulfils the functions of an accurate information source and a champion of healthy lifestyle choices (Dang, 2021). Many people have come to accept the mass media's growing power over time. The mass media is frequently seen by the general people as an impartial source of information. Individuals increasingly base their health decisions on what they hear or see in the media, which they depend on as their primary source of news (Dang, 2021). Public health programmes have the power to influence people's opinions about the likelihood of contracting diseases, the severity of preventable diseases in children, and the importance of prevention through the dissemination of government and non-governmental organisation (NGO) strategies and policies. Regarding vaccines intended to prevent diseases that can be prevented in childhood, media coverage can lessen or even end the cycle of disinformation and silence. Campaigns in the mass media have shown to be successful in raising the acceptability rates

of tactics and policies in a number of different nations.

Relationship between Media and Public Health

The public, both in rural and urban areas, can be empowered by the media to combat key causes of infant mortality and impairment, such as dehydration from diarrhoea and diseases that can be averted by immunisation. According to Nnabuenyi (2021), the media may educate new health skills, encourage new health behaviours, and boost community acceptability of health workers. It can also tell a large number of people about seasonal or daily variations for such activities as an immunisation campaign or the availability of a particular vaccine. Due to greater awareness, the media can assist in promoting healthy behaviours like children vaccinations, preventing negative consequences (Atousa et al., 2022). According to Nnabuenyi (2021), when behavioural changes become more common, individuals are more aware of the origins, symptoms, and remedies of many ailments.

The public can be influenced by mass media through promoting policies that can enhance public health and raising awareness of the risks associated with receiving only a portion of the recommended vaccinations or not immunising children at all. Public policy reforms that result in higher vaccination rates can be brought about, for instance, by media campaigns that stress the value of immunisations (Mahli, 2023). Public health practitioners can connect with populations and communities that have limited access to health information through the mainstream media. For instance, information on healthcare facilities and ways to prevent illness can be disseminated to rural/urban areas through radio and television campaigns (Barik, Purwaningtyas & Astuti, 2019). According to Udochi-Nwachukwu et al. (2023), health inequities can be addressed and health equity can be promoted through

the use of media. Overall, the media has a varied role in public health since it can positively affect the results of public health initiatives.

These days, the media serves a variety of purposes in society, including informational reporting, entertainment, social integration, and observation of matters of public importance. The media's function is dynamic and adaptable to the global processes taking place. Media-displayed information regarding personal wellness and lifestyle choices has the power to encourage and impact healthy lifestyle choices (Barik *et al.* 2019). Quattrin, Filiputti, and Brusafarro (2015) asserted that the public can receive critical health information on immunisations through mass media, including radio, television, and newspapers. This information includes medical treatments, rising health dangers, and measures for preventing diseases. The public can also be made more aware of the health risks associated with not immunising children and the value of adopting healthy habits by using the media. According to Rogala (2017), the media has the power to stimulate public interest in health-related topics, which in turn can boost financing for research, enhance healthcare delivery, and improve both individual and community health outcomes.

Theoretical Framework

The study is anchored on the agenda setting theory of mass communication. The potential of the media to affect the importance of subjects on the public agenda is described by agenda setting theory. This indicates that the public will always view a topic or issue as more essential if it is covered regularly and widely. The theory's primary premise is that the public follows the agenda that the media sets. According to the notion, the majority of the images we retain in our minds, the majority of the thoughts or anxieties we have,

and the majority of the topics we debate are derived from the things we have read, heard, or seen in various forms of mass media. (Asemah & Asogwa, 2012 as cited in Asemah, Nwammuo & Nkwam-Uwaoma, 2017). According to Bernard Cohen's (1963) agenda theory, an issue has a tendency to become perceived as extremely significant by the mass media audience based on the type of coverage it receives from the media. Put differently, the media possesses the ability to determine the direction of public discourse around significant matters such as childhood vaccination. The origin of the agenda-setting theory can be found in Walter Lipmann's "Public Opinion" book, which was published in 1922. The primary link between happenings in the outside world and the public's mental images, according to Lipmann's argument in the book's opening chapter, "The World outside and the Pictures in Our Heads," is the mass media. Bernard Cecil Cohen made the same observation as Lipmann in 1963: while the press may not be successful in instructing individuals what to think, it is successful in informing its audience what to think about.

The relevance of this theory to this study is that when the media (newspaper, magazine, television and radio) are constantly utilized in disseminating messages on the importance of and need for childhood immunization for Children Under Five Years (5) of Age, mothers with children under five (5) years of age will begin to think and discuss this issue as important. The mothers of these children will begin to see the need to

Data Presentation and Analysis

adopt immunization as a better method of ensuring the health and wellbeing of their children. With the GVAP strategies to address low immunization coverage, when complemented with constant media campaigns, the issues will undoubtedly be seen as important and this will increase the rate of participation.

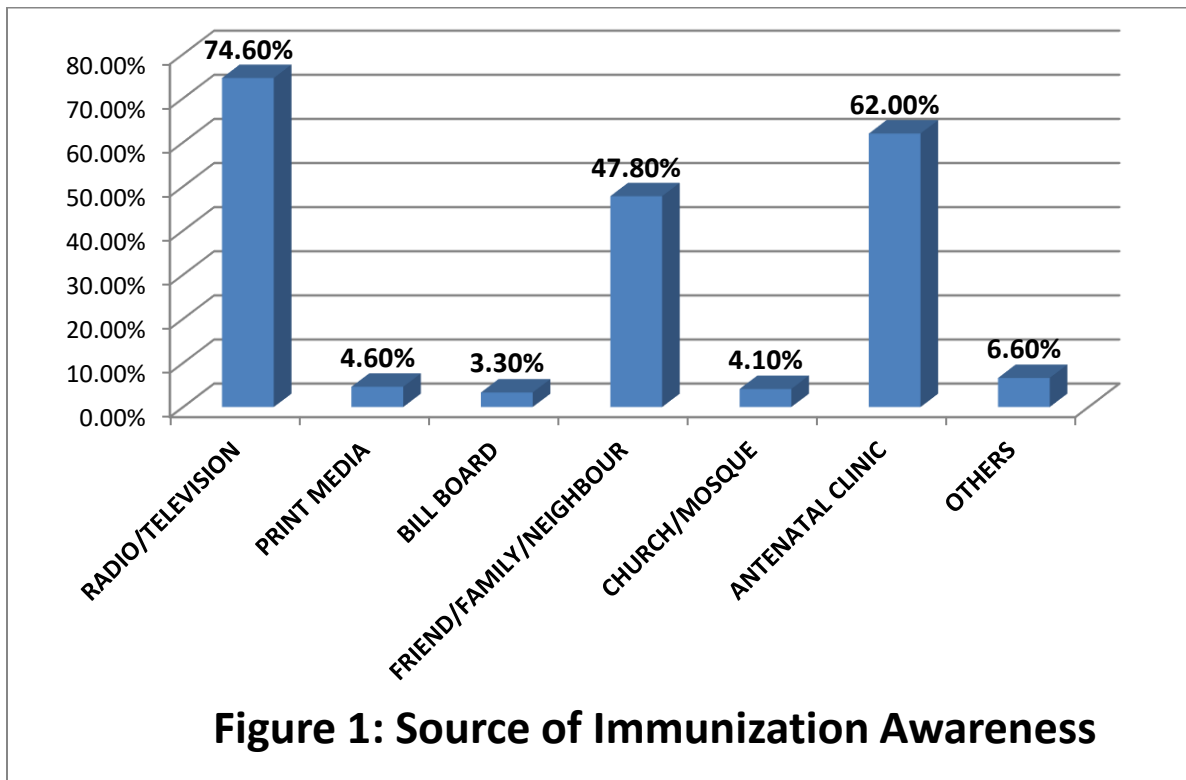
Methodology

The researchers adopted the descriptive survey research design and questionnaires was used to collect data from respondents. Asemah *et al.* (2012) observed that survey is an empirical study that uses questionnaire to discover descriptive characteristics of a phenomenon. This study covers Jos North LGA of Plateau state. The projected population is 643,200 according Population (2022) projection which is the estimated population for this study (National Bureau of Statistics [NBS], 2022). The researchers also adopted the Fisher sample size determination formula. The sample size was therefore 384 but to give allowance for incomplete response, 5% of the calculated sample size was added to round up the sample size to 400. Hence a sample size of 400 was used but 395 (99%) copies were retrieved and inputted while 5 was left out due to incomplete response implying that the analysis is based on the response of 395 mothers. The cluster sampling technique was adopted in selecting samples for this study. Data generated was entered and analysed using Statistical Package for Social Science (SPSS) version 16.0.

Table 1: Awareness of immunization

	Frequency	Percent
Yes	380	96.2
No	15	3.8
Total	395	100.0

Table 1: shows that over 96% of the respondent are aware of childhood immunization.



Radio/television is the most reported medium of immunization awareness (74.6%) followed by ANC (62%). The least reported medium was the bill board (3.3%).

Table 2: To assess the level of participation of mothers of children less than five years in childhood immunization

Child Immunized	Frequency	Percent
Yes	386	97.7
No	9	2.3
Total	395	100.0

A large majority of respondents' children under five years received immunization against childhood diseases. However 2.3% did not immunize their children

Table 3: Reasons for not participating in immunization

Reasons	Frequency	Percent
religious/cultural reasons	3	33.3
not permitted by husband	2	22.2
others	4	44.4
Total	9	100

Some reasons that were given for lack of immunization were religion/culture (33.3%) and lack of permission from spouse (22.2%)

Table 4: Relationship between awareness of childhood immunization through media and a child being fully immunized

Child immunized	awareness of immunization through media		X ²	p-value
	Yes	No		
Yes	236(91.8%)	9(60.0%)	16.058	<0.001
No	21(8.2%)	6(40.0%)		
Total	257(100%)	15(100%)		

There is a significant association between awareness of immunization through media and respondents fully Immunizing their children $p < 0.001$.

Discussion of Findings

Respondents' awareness of immunization showed a significantly higher percentage as against those who are unaware. This can be attributed to their access to television 74%, radio 74% and attendance in ANC as shown in diagram figure 1. This contributes to the women's understanding of immunization and its importance to the health of their children. A few of the women in the study had poor knowledge about immunization referring to it as an injection for sick children or for curing diseases. Another few had no awareness on immunization which is comparable to findings among rural women in Mangu LGA of plateau state (Banwat, 2013). It has been found that lack of awareness on immunization and the contraindications to immunization is a major cause of "missed opportunities" (WHO, 2019).

Respondents' access to media (television and radio) could have increased their awareness to childhood immunization. The study assessed the level of awareness of childhood immunization through media, the result showed that level of awareness through media is higher in the study areas. This could be as a result of programmes broadcast in native languages understood by mothers. About 74% of mothers became aware of childhood immunization through television /radio, 68% through antenatal clinic and 3% through Bill board. There is a wide gap between awareness through media and other sources. There is also a slight difference in sources of awareness according to ward, educational level and occupation. Findings reveal that across the wards selected in Jos north LGA, mothers who reside in Mado community of Tudun wada, were the most likely ones to become aware of childhood immunization through television/radio and antenatal clinic at same time. This may be

attributed to the more urban nature of the area.

The findings also revealed significant level of participation of mothers in immunizing their children. There is a high level of immunization of children under five years of age which is over 97%, this differs from findings from the NDHS (2018) which put the overall level of immunization at 31%. This result is also higher than a study conducted by Nomhwang, Nomhwange, Shuaib, Braka, Godwin, Kariko, Gregory, Tegegne, Okposen & Onoka (2018) on Routine immunization community surveys as a tool for guiding programme implementation in Kaduna state, Nigeria 2015–2016, the result showed 67% in the fourth quarter of 2015 and 76% by the end of the second quarter of 2016. This difference may be possibly due to the semi-urban nature of the environment; the availability of a significant number of primary health care centres with close proximity rendering immunization service, the availability of three tertiary institutions also rendering immunization services and the availability of social amenity such as light which enables the community power their social media sources (that is: television and radio) that can provide information on immunization.

Findings in the study revealed that there is a significant association between awareness of immunization through Media broadcast (radio/television) and participation $p < 0.001$. This shows the importance of media in improving awareness and invariably participation of mothers in immunizing their children that are under five years of age. A study in Pakistan showed that awareness improved immunization and reduced missed immunization episodes in a rural community (Anjum, Omair, Inam, Ahmed, Usman, & Shaikh, 2015).

Conclusion

The level of awareness on childhood immunization was significant in the four communities randomly selected from the four wards. Participation of mothers with children under 5 years of age was high towards immunization and access to media had the highest value for awareness towards childhood immunization. Also, media programmes on childhood immunization were significantly associated to level of participation of mothers of children under five years of age in childhood Immunization. For those who do not immunized their children, gave reasons to be cultural reasons and husbands' refusal to give permission to them (wives). Therefore, there is need for programmes on childhood immunization to be in every quarterly scheduled programming of media (also streaming on line) and not only when there is a flag up campaign. This will keep mothers abreast of the importance of immunization and educate new mothers on the need to immunize their children so as to prevent children's mortality and morbidity from infectious diseases (WHO, 2019).

Recommendations

- i. Government and policy makers should adopt media channels for sensitizing and mobilizing mothers

- ii. Pogrammes on childhood immunization should be in every quarterly scheduled programming of broadcast stations and other media and not only when there is a flag up campaign. This will keep mothers abreast of the importance of immunization and educate new mothers.
- iii. Qualitative research should be employed in collaboration with health workers in communities with resistance to immunization uptake, to form a background for packaging media programmes familiar to mothers with children under five (5) years in their ethnic languages. These programmes can be accepted by those communities to improve immunization awareness and participation.
- iv. Media programmes should be in forms of drama, jingles and music in creating awareness for effective childhood immunization.
- v. The social media platform can also be used to promote childhood immunization content.

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