

CHILD IMMUNISATION AND VACCINE HESITANCY IN NIGERIA: PRESENTATION OF THE NEW P-PROCESS MODEL AS A PANACEA FOR BEHAVIOUR CHANGE

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Abstract

The problem of vaccine hesitancy concerning immunisation has become a very serious one in sub-Saharan Africa, including Nigeria. However, Nigeria through the assistance of USAID, Bill and Melinda Gates Foundation, UNICEF, and WHO, among others, immense capacity has been demonstrated to reduce Vaccine-Preventable Deaths (VPDs) in children, especially among those under five years. But, there are still some grey areas in the country because of socio-cultural and religious factors. This paper discusses issues surrounding child immunisation and vaccine hesitancy, with particular focus on Nigeria. Furthermore, the author argues that since using the mass media alone cannot have the much –desired effects on reducing vaccine hesitancy, using evidence-based and research-driven model such as the “New P-Process Model” will contribute tremendously to behaviour change in terms of vaccine hesitancy. The “New P-Process Model”, a modification of the original one is a strategic communication intervention initiative on development and health-related issues. It has been used with varying degrees of success all over the world. The author discussed some critical issues that impinge on immunisation in Nigeria and recommended among others that, concerted efforts by the three tiers of government in Nigeria, multilateral agencies, international partners/donor agencies, as well as health communication experts should be made by incorporating the “New P-Process Model” in the child immunisation campaign in the country, in order to reduce vaccine hesitancy.

Keywords: Child immunisation, Vaccine hesitancy, Nigeria, The New P-Process Model, Panacea, Behaviour Change.

Introduction

The global immunisation of children against the six deadly, but Vaccine-Preventable Diseases (VPDs) – “Diphtheria”, “Measles”, “Pertussis”, “Poliomyelitis”, “Tetanus”, and “Tuberculosis” (Adeyinka, Oladimeji, Adeyinka, and Aimakhu, 2019), is central to the reduction of child mortality all over the world, including Nigeria. It is against this backdrop that expanding the access and improving the quality of the administration of the vaccines against the six child-killer diseases becomes a recipe for the reduction of VPDs. Thus, immunisation is considered a safe, efficient, and relatively cheaper public health intervention initiatives that can save

well over 4 million lives of children from VPDs. Durowade, Musa, Sanni, Adeniyi, and Osagbemi (2021). To underscore the priority given to the immunisation of children, especially in the developing countries, the World Health Organisation (WHO) inaugurated the Expanded Programme on Immunisation in 1974 to demonstrate its universal efforts at ensuring life-savings vaccines for children, in spite of their socio-economic status or geographical background. Despite some challenges however, in well over 50 years now, the EPI has undergone some transformation and also recorded remarkable successes which have redefined and reshaped the discourse and contours of

global health. At first, the EPI's target was on preventing the six child-killer diseases; but today, the programme has grown to include 13 recommended vaccines in the lifespan of humans, and also an additional 17 vaccines depending on the circumstances surrounding their recommendations (www.who.int). In Nigeria, the EPI was launched in 1978 to provide routine immunisation to children less than two years. Although this programme recorded some level of success at the initial stage, which saw to the reduction of the child morbidity, there were still some challenges due to ignorance as well as socio-cultural and religious sentiments (USAID, 2022).

It is instructive to note that an estimated 5 million children die annually worldwide, out of which sub-Saharan Africa accounts for over 40 percent, while South Asia, accounts for over 30 percent. This could be attributed to poor national coverage of the immunisation exercise. That is why, out of the over 15 million children across the globe who did not receive three doses of the vaccine for Diphtheria, Pertussis, and Tetanus, over 14 percent of them were Nigerian children (Adeyinka, Oladimeji, Adeyinka, and Aimakhu, 2019). To this end, strategic communication interventions have been identified to be a critical success factor in the fight against VPDs. Ngwu (2017), notes that the application of strategic health communication contributed tremendously to the reduction of Poliomyelitis from the 2006 risky level by 80 percent to the present level of drastic reduction, especially with the resounding from the Bill and Melinda Gates Foundation. Strategic communication is quite important to the noticeable impact on the overall immunisation through scientific and data-based social mobilisation efforts. According to Ejembi (2013), effective communication strategies that is research-driven in the immunisation campaign would have reduced the annual death and disability rates of children by well over two million.

Thus, communication is quite tangential in all the immunisation programmes and activities. According to Kaufman, Ames, Bosch-Cabplanch, Cartier, Cliff, Glenton, Lewin, Muloliwa, Oyo-Ita, Rada, and Hill, (2017:10):

“Vaccination communication may be used to generate demand for routine vaccination, facilitate the introduction of new vaccines, or publicise vaccination campaigns. It can change how people think and feel about vaccination and is instrumental in addressing vaccine hesitancy. However, communication is not always considered, planned or delivered in a rigorous and evidence-informed way”.

Kaufman, *et al* (2017), equally revealed that in their efforts to address the problem of communication deficiency or lacuna in the immunisation campaign, and to throw more on the diverse vaccination communication interventions, they developed a classification system of health-related communication interventions focused on routine childhood vaccinations. To this end, they noted that vaccine communication should be able to “inform or educate”; “remind or recall”; “teach skills”; “provide support”; “facilitate decision-making”; “enable communication”; and “enhance community ownership”. Arising from the foregoing, this research aims to present the new “P” process model that is holistic and integrated in its communication intervention approach as a panacea to vaccine hesitancy on child immunisation in Nigeria.

Literature Review

This section will review some studies in the area of immunisation campaign and Behaviour Change Communication (BCC).

Immunisation Campaign

The National Programme on Immunisation is a special health initiative under the Nigerian government, domiciled in the Federal

Ministry of Health, with the mandate of monitoring the health status of its target population, also to assist in the prevention of the spread of emergence of infectious diseases and improve the overall health status of its citizens. The commendable efforts of the Nigerian governments are been complemented by UNICEF, USAID, WHO and the Bill and Melinda Gates Foundation, among others, whose major objective is to ensure that “all countries have a national immunization programme to protect the population against vaccine-preventable diseases” (WHO 2022, p.1). According to Ngwu (2017), WHO, which is at the epicentre of health promotion and disease prevention, first launched the Expanded Programme on Immunisation (EPI) in 1974 as one of its key Primary Health Care (PHC) intervention initiatives. The initial EPI aims were to “ensure that every child received protection against six childhood diseases: Tuberculosis; Tetanus- toxoid; Haemophilus influenza type b; Yellow fever; Rotavirus; and Hepatitis B” (WHO, 2022).

Following the above, Nigeria inaugurated its Expanded Program on Immunization (EPI) in 1978 to key into the WHO initiatives, which was later rebranded and re-launched in 1984 as the National Programme on Immunisation (NPI). According to Temitayo-Oboh, Adegbola, Dedeke, Adeniyi, Soyanno, Ajewole, and Sanni (2023), “immunisation is a cost-effective public health” intervention plan promoted by the Federal Government of Nigeria, multilateral agencies, and international donors/partners through the NPI to improve healthy living and eliminate or reduce drastically the six child-killer diseases (Tuberculosis, Poliomyelitis, Diphtheria, Tetanus, Measles, and Whooping cough) or any other emerging variant. It is believed that the standard of living envisioned among children and pregnant women intended through the NPI can only be attained through

the application of effective health communication strategies to combat possible resistance, garner acceptance and adequate utilisation of the vaccines by the people who are the target audience- pregnant women and children (Adegbola, Dedeke, Adeniyi, Soyanno, Ajewole, and Sanni, 2023).

According to Masoud (2022), immunisation is the process of administering a vaccine to an individual, in order to give immunity against a disease. He argues that the implementation of routine immunisation campaign has to the eradication of small pox and the elimination or reduction of Poliomyelitis in most regions of the world. Also, Chumakov, Ehrenfeld, Agovi, and Wimmer (2022), notes that immunisation campaign or mass vaccination campaign refers to the public policy-driven efforts and initiatives to vaccinate a target population or even an entire population within a country or region, within a period of time. They argue further this could be during a pandemic, just like during the Covid-19 Pandemic, or during an outbreak of a disease, necessity an emergency.

Behaviour Change Communication

Behaviour Change Communication (BCC) is the application of strategic communication to make individuals and communities to embrace sustainable and life-changing health practices. It is an interventionist and interactive communication strategy and tactics to foster the adoption of positive behaviours among the people. According to the Global Health eLearning Center (2022), its building blocks are: awareness, knowledge, contemplation, intention, action, and maintenance. USAID (2022) expatiates on BCC as follows:

“Behaviour Change Communication (BCC) is a research-based, consultative process of addressing knowledge, attitudes, and practices through

identifying, analyzing, and segmenting audiences and participants in programs and by providing them with relevant information and motivation through well-defined strategies, using an appropriate mix of interpersonal, group and mass media channels, including participatory methods”.

In discussing the place of communication in broad terms in the participatory process, the Food and Agricultural Organization (2019: 53-54), asserts that communication can be used for:

1. Better planning and programme formulation by consulting the people and actively involving them in making decisions that will affect them.
2. People’s participation and community mobilization, by building their confidence to make and carry them out as a community in a self-reliant way.
3. Changing lifestyles through the use of mass media to raise awareness, peer counselling techniques of interpersonal communication and social communication methods to pioneer attitudinal change.
4. Improve training through communication media to bring alive new ideas and technicalities and energize programmes of training and human resource development.
5. Rapid spread of information far and wide throughout a region or an entire country through the mass media.
6. Effective management and co-ordination: communication approaches when crucial when a new development orientation is being introduced within a ministry, when strengthened teamwork is needed and policy-makers need to be kept abreast of the field situation.
7. Gaining the attention of decision-makers and generating their support.

Following the above, USAID (2022:18), argues that the guiding principles of a BCC campaign in the area of health interventions are that the campaign must be “result-oriented”; “evidenced-based on the scientific and pragmatic practices towards behavior and attitude change”; “client-centered”; “participatory”; and “benefit-oriented”. In terms of the BCC campaign being results-oriented, USAID argues on that the impact of a communication intervention and efforts should be determined ultimately by the outcomes, output, and impact of the health campaign; and that clear targets, indicators, and deliverables for enhanced knowledge and adoption of healthy behaviours should be established, evaluated, and verified through monitoring and the efficient gathering of data. In terms of the campaign being based on evidence, USAID also states that the planning of communication should use well-informed baseline research on local issues and the clients or target audience and that communication theories and hypotheses should be tested as avenues to inform and guide the campaign.

Concerning the campaign being client-centred, USAID noted that representatives of all the clients- those who will carry out the campaign, that is, care-givers, community mobilisers, as well as the direct beneficiaries of the campaign, should take part in the process of shaping messages that will address identified needs. For the participatory element of the BCC campaign, USAID asserted that the involvement of clients should be all through the communication process, including programme design, implementation, and evaluation. And lastly, for the campaign to be benefit-oriented, the benefits to be derived from behaviour change, and the support for change must be clearly-seen, and must be at the centre of all BCC campaign efforts.

It is believed that strategic communication remains a key success factor in inducing behaviour change in the people, regarding the campaign on immunisation in Nigeria. BCC is a multi-dimensional tool for promoting and sustaining the embrace of immunisation in individuals and communities, by distributing measured and accurate health messages through a variety of communication media/channels. So, BCC should lead to the drastic reduction in vaccine hesitancy in Nigeria, especially in the North. It follows therefore that BCC should be at the centre of the use of integrated media and communication strategies in the bid to mobilise the people, particularly mothers and even their spouses to embrace child immunisation against the six deadly diseases.

Theoretical Framework

This research is anchored on the “Planned Behaviour Theory” and the “Health Belief Model” (HBM). The “Theory of Planned Behavior” is a theory used to understand and predict behavioural patterns. This theory believes that behaviours can be determined immediately by certain innate intentions and under certain circumstances. The theory explains further that behaviours can be propelled by a combination of three factors: “attitudes toward the behaviour”; “subjective norms”; and “perceived behavioural control” (Ajzen, and Fishbein, 1980). The theory, which is an extension of the Theory of Reasoned Action postulated by Fishbein and Ajzen (1975) and modernised by Ajzen and Fishbein in 1980, was developed by Icek Ajzen in 1985 as a general model to predict and explain behaviours across a wide variety of different types of behaviour spectrums. It follows therefore that a health

communication intervention that can accurately predict the behaviours and responses of the target population to a given campaign, will most certainly be able to predict the behaviour-inducing strategy to be adopted.

The Health Belief Model (HBM) on the other hand, was developed in the early 1950s by social scientists at the United States of America Public Health Service so as to understand the failure of people to adopt disease prevention strategies or screening tests for the early detection of diseases (Rosenstock, 1974). Later, the HBM was used for patients who were responding to symptoms and complying with medical treatments. The HBM believes that a person's belief in threat of an illness or disease to his or her person, coupled with a person's belief in the effectiveness of the recommended health behaviour or action will predict the likelihood that the person will adopt the behaviour (Karen, Rimer, and Viswanath, 2008). The HBM which had its roots in psychological and behavioural theory posits that the two components of health-related behaviour are (1) “the desire to avoid illness, or conversely get well if already ill”; and (2) “the belief that a specific health action will prevent, or cure, illness”. Ultimately, an individual's course of action often depends on the person's perception of the benefits and barriers related to health behaviour (Siddiqui, Ghazal, Bibi, Ahmed, and Shaimuna, and Sajjad, 2016: 12). So, this model is relevant to this research in the sense that it will reveal the factors that underpin the behaviour of the target population when it comes to embracing the vaccination of children against the six deadly diseases.

Child Immunisation, Vaccine Hesitancy and the Relevance of the New “P” Process Model



The new “P-Process Model”, a modification of the original “P-Process Model”, was developed in 1982, by the John Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP), and their partners at the Population Communication Services (PCS) project, supported by USAID (Health Communication Partnership, 2003). This model was developed as a scientific and strategic tool for planning evidence-based communication programmes. Well over 40 years now, the “P-Process” has continued to have influence over the development, implementation, monitoring, and evaluation of many health communication interventions, and programmes, as well as being a reference point for communication-oriented materials and tools for mass media and grassroots channels (interpersonal and group). The

model is used for training and capacity-building/strengthening strategic communication. Through its application in various health communication campaign worldwide, the influence of the “P-Process Model” reverberates around the world. The model involves the following steps: (1) “Analysis” (2) “Strategic Design” (3) “Development and Testing” (4) “Implementation and Monitoring”, and (5) “Evaluation and Replanning”. USAID (2023), expatiates on the five steps as follows:

Step 1- Analysis: This is the first step in the development of effective communication programmes; however, this step does not need to be long and detailed if the programme is anchored on well-documented past experiences. The programme staff of the

immunisation campaign need to understand the challenges of immunisation like the root causes of vaccine hesitancy, the target population and their cultures, existing policies and programmes, active organisations, and available communication channels. In most cases, much of the situation analysis on child immunisation is available from demographic, epidemiological, sociological, and economic studies and accessing such data will result in the steps below:

Immunisation and mobilisation personnel should conduct a situation analysis which will result to a thorough description of the major challenges and barriers being addressed; determine its seriousness and causes; review existing health and demographic data on child immunisation, data from both primary and secondary sources, study the findings, and any other information available on the challenges - in this case, vaccine hesitancy; ascertain factors impeding or enhancing the desired changes; take into cognizance the basic social, cultural, and economic challenges facing the target population and even communities that the immunisation programme would like to reach; develop a statement of problem that summarises the challenges to be addressed; carry out formative research, listen to understand the needs and priorities of the target population, especially nursing mothers; and also conduct both theoretical and empirical baseline research, in order to determine the current status of the challenge and measure correctly the immunisation programme's progress and effects.

Under step 1 still, audience/communication analysis is important. From the broad situation analysis, immunisation officers should carry out a detailed audience and communication analyses on the immunisation campaign;

carryout a participation analysis; at the local, state, and national levels; identify allies and partners that will help in the initiation relevant policies and strengthen communication interventions; at the community level, divide the primary and secondary target population; identify community mobilisers/change agents; conduct a behavioural and social analyses; examine the attitudes, behaviours and knowledge of the target population using data from formative research and additional in-depth studies, where necessary. Also, identify social groups, socio-cultural practices, and group dynamics (including leadership patterns) at the community level; and assess the needs for communication and training; analyse the media and use of the target population.

Step 2- Strategic Design: Every health communication programme needs a strategic plan. To this end, it imperative to set communication goals. So the managers of the immunisation programme, both routine and planned, should set goals that are "Specific", "Measurable", "Achievable", "Realistic", and "Time-bound" (SMART); so the immunisation officers/health workers should identify the kinds of attitudes and behaviours in the nursing mothers/care-givers that they want to change, including the opinion leaders in a community; based on this, proper immunisation campaign approaches and positioning should be done; the immunisation should select a behaviour change model upon which to base the programme, in this case the reduction of vaccine hesitancy; state clearly the assumptions which will guide the basic strategy and approach; explain the imperative of the programme to behaviour change; position the programme adequately to benefit nursing mothers/care-givers especially; consider a well-planned, multimedia approach for a lasting effects. At the

community level, include the indigenous media that will help in community mobilisation; and develop a monitoring and evaluation plan to assess the effects of the indigenous media in community mobilisation for the immunisation programme.

Step 3- Development and Testing: The development of concepts, messages, information and education materials stories and participatory processes requires creativity. This must not only be guided by the analysis and strategic design in Steps 1 and 2, but also must be creative enough to evoke emotions that will spur nursing mothers/care-givers. This step may involve the development of guidelines, tools, toolkits, including facilitation manuals for group interaction or training manuals for counseling, or any other forms of interventions; involve key stakeholders, especially religious and traditional leaders in design workshops to ensure that the end products meet their needs; test the concept with these stakeholders and representatives of the target population to be reached; follow concept testing with in-depth pretesting of messages, materials, and processes with both primary target population (nursing mothers/care-givers) and the secondary target population (the community); give feedback (results) to partners and allies, like the community stakeholders, in order to ensure maximum ownership and use; make changes based on the message pre-testing; and retest materials to make sure that revisions are done well and final adjustments done before replication, printing, or final productions.

Step 4- Implementation and Monitoring: This step emphasises full participation, flexibility, and training. Monitoring involves tracking outputs to ensure that all activities take place as planned and potential problems are quickly tackled; develop and implement a dissemination plan that may include

community stakeholders, NGOs, and the media for maximum coverage. Focus on institutional capacity-building and teamwork; mobilise key community stakeholders; share level of immunisation coverage with partners, allies, and communities; keep everybody involved motivated towards the strategic goal; manage and monitor the immunisation programme; ensure that the immunisation personnel/health workers use the appropriate language and tone while talking with nursing mothers/care-givers; immunisation officers should also enlighten the nursing mothers on the six deadly child-killer diseases, among others, so that the nursing mothers can have the knowledge for the sake of institutional memory.

Step 5- Evaluation and Replanning: This stage measures the extent to which a health communication programme achieves its goals. It can also explain why an immunisation programme is successful (or not), including the effects of the different activities on both the primary and secondary target populations. Good programme evaluation can enhance the improvements and redesign of an immunisation programme, guide the cost-effectiveness of future allocations, and supports advocacy and fundraising; most evaluations measure results to find out if the desired change has occurred in terms of the adoption of the proper behaviour. It is necessary for everyone involved in the campaign be aware of the immunisation programme's effects, whether it is positive or not; immunisation officers should share the positive results widely with partners, allies, key stakeholders, the media, and funding agencies; the results will demonstrate where follow-up is needed and where immunisation programme activities can be extended; a good evaluation will show if the immunisation programme is weak and where it needs revision in design processes,

materials, or overall strategies and activities. In other ways, it will show what works and how to repeat the positive results.

The immunisation campaign managers may have to return to the analysis stage if the situation changes or if new causes are found for the challenges being addressed. It is important to note that throughout the process, immunisation officers/health workers should keep in mind participation. In this case, strong communication programme should fully engage multiple stakeholders at the local, state, and national levels. Secondly, capacity-building is also important: a successful plan always considers ways of building capacity at the institutional and community level. Also, monitoring and evaluation are essential components of good child immunisation campaign management. It is important to emphasise that a well-managed and strategic immunisation campaign programme can have a measurable effect.

Conclusion and Recommendations

The focus of this paper was how on to use the “New P-Process Model” to reduce vaccine hesitancy on child immunisation in Nigeria. It was noted that strategic communication through the use of the “New P-Process Model” was a panacea in the intervention on vaccine hesitancy among the target population in the country. Undergirded by research and evidence-based, the “New P-Process Model” a multi-dimensional and strategic communication invention has been used with varying degrees of success in the developing countries on development and health-related issues. Because of its methodological steps as well as diverse channels and media to be used, the model is strategic to the success of the immunisation campaign in Nigeria. Based on the above, the author recommends that concerted efforts

by the three tiers of government in Nigeria, multilateral agencies, international partners/donor agencies, as well as health communication experts should be made by incorporating the “New P-Process Model” in the child immunisation campaign in the country, in order to reduce vaccine hesitancy; and that the “communitisation” angle of the immunisation campaign should be stepped up so that the marginalised and others on the fringe or periphery of the society can be reached.

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