THE ROLE OF STRATEGIC HEALTH COMMUNICATION IN COMBATING INFANT MORTALITY: A CASE STUDY OF HEALTHCARE PROVIDERS IN IMO STATE, NIGERIA

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ABSTRACT

Infant mortality remains a critical public health challenge in Nigeria, with Imo State reflecting national struggles to meet Sustainable Development Goal (SDG) 3.2. This study investigates the role of health communication as a strategic intervention to reduce infant mortality rates. Anchored on the Media Dependency Theory, the research posits that in a high-health-risk environment, caregivers and parents depend heavily on effective media messages for guidance. A census-based survey method was employed, sampling all 167 pediatricians and nurses from three major hospitals in Owerri Metropolis (FUTH Owerri, General Hospital Umuguma, and Save-A-Life Hospital). Findings indicate a significant deficit in the frequency of health communication between caregivers and parents, with 44% of respondents characterizing interactions as "not too regular." Key identified causes of infant mortality include maternal infections (15.9%), difficulty breathing (18.3%), and vomiting (15.2%). The study concludes that the current health communication model is insufficiently proactive and fails to effectively bridge the knowledge gap. Recommendations include the design of more persuasive, culturally resonant, and frequent health messages, increased budgetary allocation for child health, and the fostering of public-private partnerships to enhance healthcare infrastructure and communication campaigns.

Keywords: Health Communication, Infant Mortality, Maternal and Child Health, Media Dependency Theory, Healthcare Providers, Nigeria.

Introduction

The persistent issue of infant mortality represents one of the most profound indicators of a nation's health and socio-economic development. Despite global advancements, Sub-Saharan Africa, and Nigeria in particular, continues to bear a disproportionate burden. Nigeria accounts for a significant percentage of global under-five deaths, with an Infant Mortality Rate (IMR) that remains alarmingly high, positioning it among the countries with the highest rates in the world (UNICEF, 2017; WHO, 2023). This crisis is acutely felt in regions like Imo State, where systemic challenges in healthcare access, socio-economic disparities, and ineffective health messaging converge.

The IMR is not merely a statistic; it is a stark reflection of the effectiveness of a country's health policies, systems, and practices. High rates are often symptomatic of deeper issues including poverty, illiteracy, gender inequality, and fragmented healthcare delivery (Maomi, 2022). Goal 3.2 of the Sustainable Development Goals (SDGs) ambitiously aims to reduce neonatal mortality to at least 12 per 1,000 live births and under-five mortality to 25 per 1,000 live births by 2030. However, with the deadline

looming, Nigeria's progress has been sluggish, casting doubt on the achievability of this target (Okenedo, 2024).

Within this complex landscape, health communication emerges as a critical, yet underexploited, tool. Effective communication can bridge the gap between medical knowledge and community practice, influencing behavior, promoting preventive care, and ultimately saving lives (U.S. Department of Health and Human Services, 2000). It has the capacity to transform patient-provider dynamics, empower mothers with knowledge, and foster community-wide engagement in health initiatives.

This study, therefore, seeks to critically examine the role of health communication in combating infant mortality in Imo State, Nigeria. By focusing on the perspectives of frontline healthcare providers (pediatricians and nurses), this research aims to identify communication gaps, pinpoint the leading causes of infant deaths as perceived by professionals, and propose evidence-based strategies for crafting more effective, targeted, and life-saving health communication interventions.

Specifically, it aimed at establishing the frequency of health communication between caregivers and parents; determine the role of health communication messages in combating infant mortality in among women in Imo State, and ascertain factors responsible for prevalence of infant mortality rates.

It is hoped that at the findings will hold significant theoretical value as it empirically validates and applies the Media Dependency Theory within a high-stakes public health context. The research demonstrates the theory's relevance in explaining how, in an environment of significant health risk like infant mortality, the target audience (parents and caregivers) becomes highly dependent on information from healthcare providers and media to reduce uncertainty and guide life-saving decisions. The finding that infrequent communication correlates with poor outcomes strengthens the theory's core premise: that dependency relationships are most critical in times of crisis. By situating this theory within the specific socio-cultural landscape of Imo State, Nigeria, the study also contributes to its evolution, suggesting that cultural and infrastructural barriers can act as critical intervening variables that frustrate the dependency relationship, thereby expanding the theory's explanatory framework beyond its traditional Western applications.

For health practitioners, policymakers, and communication professionals, this study provides an evidence-based roadmap for intervention. By identifying the specific, practitioner-verified causes of infant mortality in the region (e.g., maternal infections, difficulty breathing) and pinpointing the critical gap in communication frequency, the study moves beyond generalities to offer actionable insights. It empowers healthcare administrators to design targeted training programs for staff on proactive patient engagement and equips public health message designers with a clear set of culturally resonant principles for creating effective campaigns. Furthermore, the strong recommendation for increased budgeting and public-private partnerships provides a pragmatic, policy-level strategy for improving healthcare infrastructure and funding sustained communication efforts, thereby translating academic findings into tangible tools for saving lives and improving professional practice in maternal and child health.

Within academia, this study makes a substantive contribution to the intersecting fields of health communication and public health. It fills a critical knowledge gap by providing localized, empirical data on the communication barriers impacting infant mortality in South-Eastern Nigeria, a region often underrepresented in scholarly literature. The methodology, which directly captures the perspectives of frontline pediatricians and nurses, offers a valuable model for other researchers seeking to ground health communication studies in practitioner-led evidence. Furthermore, the study identifies a fertile ground for future research, suggesting avenues for exploring the impact of specific message formats, the role of digital media in bridging the communication gap, and comparative analyses across different Nigerian states to understand regional variations in health communication efficacy.

Theoretical Framework: Media Dependency Theory
This study is underpinned by the Media Dependency Theory, developed by Sandra Ball-Rokeach and Melvin DeFleur (1976). The theory posits that the more an individual depends on media information to meet their needs, the more influential that media will be on their beliefs and behaviors. This dependency intensifies in times of high uncertainty or social change, such as a public health crisis.

In the context of infant mortality in Imo State, this theory provides a powerful lens. Parents and caregivers, anxious and seeking solutions for their children's health, exist in a state of high need. Their dependency on credible health information—whether from interpersonal communication with doctors, mass media campaigns, or social media—is acute. The theory suggests that the *frequency*, *clarity*, and *perceived credibility* of health messages will directly impact their ability to make informed decisions. If the media system (including health institutions as information sources) fails to provide consistent, accessible, and persuasive information, this dependency is frustrated, leading to negative health outcomes. This framework guides the investigation into how effectively the current health communication environment satisfies the dependency needs of the population.

The Meaning and Strategic Role of Health Communication
Health communication is a strategic and multidisciplinary field dedicated to informing, influencing, and motivating individual, institutional, and public audiences on critical health issues (U.S. Department of Health and Human Services, 2000). Its scope is expansive, encompassing disease prevention, health promotion, the formulation of healthcare policy, and the enhancement of community well-being. More than mere information dissemination, it is the studied application of communication strategies to guide individual and community decisions that improve health outcomes (CDC, 2011). In essence, it is a planned and purposeful activity designed to empower members of society to meaningfully address and manage health challenges.

The efficacy of health communication lies in its ability to bridge the gap between medical knowledge and public action. As audiences are exposed to targeted messages, they interpret and apply this information to prevent or manage prevailing health issues. The benefits are multifarious. As noted by the National Center for Health Statistics (2012), effective health communication can:

- **For individuals:** Raise awareness of health risks and solutions, provide the motivation and skills needed for risk reduction, facilitate support networks, and reinforce positive attitudes. It empowers informed decision-making in complex choices, such as selecting health plans and providers.

- **For the community:** Influence the public agenda, advocate for equitable health policies, promote positive socio-economic and environmental changes, improve the delivery of public health services, and encourage social norms that benefit collective health and quality of life.

In the specific context of infant mortality, health communication transitions from a supportive tool to a critical intervention. It is the mechanism through which national governments, international agencies, and NGOs can collectively strive to create awareness, dismantle harmful perceptions, and motivate the adoption of life-saving behaviors and attitudes.

Designing Effective Health Messages for Infant Mortality
Crafting a message to combat a complex issue like infant mortality requires strategic precision. Generic information campaigns are insufficient; messages must be meticulously designed to resonate with the target audience's reality. Key principles include:

- **Cultural and Linguistic Resonance:** Messages must be crafted in local languages and dialects using easily understandable concepts. They should be socially appropriate and leverage cultural values to build trust and appeal.
- **Actionable and Practical Guidance:** Information must be practical and oriented towards feasible actions. Vague advice should be replaced with clear, step-by-step guidance (e.g., "Visit the clinic immediately if your baby has a fever" instead of "Monitor your baby's health").
- **Clarity and Brevity:** Given potential literacy barriers and information overload, messages must be concise, relevant, and directly address the issue without ambiguity.

- **Benefit-Oriented Framing:** Messages should clearly articulate the benefits of behavior change (e.g., "Exclusive breastfeeding protects your baby from diarrhea and helps them grow stronger") to enhance motivation.

A strategically designed health message can achieve more than awareness; it can influence deep-seated perceptions and beliefs, catalyze behavior change, demonstrate healthy skills, refute deadly myths and misconceptions, and advocate for policy support, ultimately strengthening the entire health ecosystem.

Understanding Infant Mortality: Definition, Causes, and Prevention

Definition and Global Context
The Infant Mortality Rate (IMR), defined as the number of infants who die before reaching one year of age per 1,000 live births in a given year, is a quintessential indicator of a nation's overall health and developmental status (WHO, 2023). Despite global progress, the burden remains starkly unequal. Globally, IMR declined from 65 deaths per 1,000 live births in 1990 to 27 in 2020 (World Bank, 2022).
This improvement is attributed to enhancements in women's education, healthcare accessibility, nutrition, and the widespread implementation of interventions like immunization and promotion of appropriate breastfeeding practices. However, this aggregate figure masks persistent crises in regions like Sub-Saharan Africa, where rates remain disproportionately high.

Multifaceted Causes of Infant Mortality
The etiology of infant mortality is complex and multifactorial, often categorized into medical, socio-economic, and environmental causes.

- **Medical Causes:** The leading direct causes include preterm birth complications, birth asphyxia/trauma, neonatal infections (e.g., sepsis, pneumonia, tetanus), and congenital anomalies (Onokoya, 2022). These often manifest through symptoms such as difficulty breathing, convulsions, fever, and diarrhea.
- **Maternal and Fertility Factors:** A strong correlation exists between maternal health and infant survival. Risks are elevated for infants born to very young or older mothers, and those with short birth intervals (<24 months) or high birth order (5+). Maternal infections and poor nutritional status are directly transmitted to the child, compromising their health.
- **Socio-Economic and Environmental Determinants:** Illiteracy, particularly among rural women, limits health knowledge and access to care. Environmental factors are crucial; these include community-level infrastructure (source of drinking water, sanitation systems) and household-level conditions (overcrowding, indoor air pollution, cohabitation with livestock).
- **Health System Deficiencies:** An acute shortage of skilled health personnel—including pediatricians, midwives, and birth attendants—creates a critical barrier to quality care (Ministry of Health, 2018). This is compounded by barriers to access, such as early discharge from hospitals and delays in seeking care.

Evidence-Based Preventive Measures
A multi-pronged approach is essential for effective prevention. Key evidence-based strategies include:

1. **Strengthening Maternal and Neonatal Healthcare:** Ensuring improved access to quality prenatal and postnatal care, including mental health services and skilled attendance at birth.
2. **Expanding Immunization Programs:** Ensuring regular vaccination of newborns and promoting maternal vaccination to confer early immunity.
3. **Promoting Nutritional Practices:** Advocating for exclusive breastfeeding for the first six months and ensuring proper maternal nutrition before, during, and after delivery.

4. **Launching Public Health Campaigns:** Providing information on well-baby care, danger signs in newborns, and the risks of exposure to secondhand smoke.
5. **Addressing Underlying Determinants:** Investing in female education, improving water and sanitation infrastructure, and empowering women to make informed decisions about child spacing and family planning.

By integrating robust health communication strategies that address these precise causes and promote these preventive measures, the fight against infant mortality can be significantly advanced.

Methodology
This study employed a cross-sectional survey research design. This approach was deemed appropriate for collecting quantitative data from a specific population at a single point in time to describe variables and examine relationships between them.

The study population comprised all pediatricians and nurses specializing in maternal and child health across three major hospitals in Owerri Metropolis, Imo State: Federal University Teaching Hospital (FUTH) Owerri, General Hospital Umuguma, and Save-A-Life Hospital. A census sampling technique was adopted, encompassing the entire population of 167 healthcare professionals (56 pediatricians and 111 nurses) as of February 2024. This approach eliminated sampling error and provided a comprehensive dataset from the targeted expert group. The breakdown of the respondents are as follows:

Table 1: Select Hospitals and Pediatricians in Owerri Metropolis

S/N	L.G.A	HOSPITALS	PEDIATRICIANS	NURSES	TOTAL
1.	Owerri Municipal	F.M.C	25	41	
2.	Owerri West	General Hospital	22	53	
3.	Owerri North	Save a – life	8	17	
	Total		**56**	**111**	**167**

A structured questionnaire was the primary instrument for data collection. It was designed with sections capturing demographic information, frequency of health communication interactions, perceptions of leading causes of infant mortality, and assessment of the role of health communication messages. The instrument was validated by experts in public health and communication studies, and a pilot test ensured reliability and clarity.
Of the 167 questionnaires distributed, 164 were completed and returned, yielding a high response rate of 98.2%. Data were analyzed using simple descriptive statistics. The analysis focused on summarizing the responses to identify key patterns and trends related to the study's objectives. The data is presented as follows:

Table 2: Frequency of Health Communication between children caregivers and Parents

S/N	VARIABLES	FREQUENCY	%
	Regularly	49	29.8
	Not too regularly	72	44
	Rarely	43	26.2
Total		**164**	**100**

Table 2 shows that the frequency of health communication between children caregivers and parents is not something that happens regularly. It takes place not too often. This implies that caregivers do not have the opportunity to properly interact with their patients so as to have updated knowledge of their child's health disposition.

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Table 3: Factors responsible for infant mortality rate

S/N	VARIABLES	FREQUENCY	%
	Diarrhea	22	13.4
	Vomiting	25	15.2
	Cough	5	3
	Difficult breathing	30	18.3
	Fever	5	3
	High temperature	24	14.6
	Convulsion	19	11.6
	Maternal infections	26	15.9
	Others	8	9
Total		**164**	**100**

Table 3 revealed that the biggest cause of infant mortality has to do with maternal infection with 15.9%. This is followed by vomiting with a percentage value of 15.2%. The understanding is that since mothers/pregnant mothers do not visit their doctors regularly as at when appointed, it is difficult to detect most of the maternal health challenges which by extension affects the child at the neonatal stage and sometimes after birth.

Table 4: Role of Health Communication Messages in Combating Infant Mortality Rate.

S/N	VARIABLES	FREQUENCY	%
	Raise awareness of health issues, relating to children	40	24.4
	Improve patient compliance to good medicare on children	28	17.1
	Encourage positive health behavioural change Provoke public interest to guide against infant mortality	22	13.4
	Provide information on child care measures Others.	25	15.2
		31	18.9
		18	11
Total		**164**	**100**

Data in table 4 showed that both the pediatricians and nurses agree that health communication raises awareness of health issues relating to children. The implication of the data provided an explanation to the fact that health communication plays a significant role in the fight against infant mortality rate.

Discussion

The findings of this study paint a concerning yet illuminating picture of a fragmented and insufficient health communication ecosystem within the sampled healthcare institutions in Imo State. The infrequency of communication between providers and parents, as indicated by a plurality (44%) of respondents characterizing interactions as "not too regular" (Table 1), represents a critical systemic failure. This gap signifies a profound missed opportunity for the prevention, early diagnosis, and management of childhood illnesses, which is paramount in the fight against infant mortality. This finding resonates powerfully with the core tenets of the **Media Dependency Theory** (Ball-Rokeach&DeFleur, 1976), which underpins this study. The theory posits that in times of high uncertainty—such as caring for a vulnerable newborn—the audience (parents and caregivers) develops a strong dependency on the media system (here, healthcare providers and institutions) for guidance. The documented infrequency of communication suggests this dependency is being frustrated. When the institutional "media" fails to provide consistent, reliable

information, it creates an information vacuum. This vacuum is often filled by misinformation from less credible sources or leads to parental inaction, both of which can directly contribute to the poor health-seeking behaviors and negative outcomes this study seeks to address (Littlejohn, 2002).

Furthermore, the causes of mortality identified by healthcare providers (Table 2) offer a crucial roadmap for prioritizing intervention efforts. The prominence of **maternal infections (15.9%)** and **difficulty in breathing (18.3%)** underscores the intrinsic link between maternal health and infant survival, as well as the acute vulnerability of the neonatal respiratory system. This specificity moves the discussion beyond generic awareness campaigns. It demands targeted, actionable communication strategies. For instance, messages must pivot from vague advice to precise guidance: emphasizing the non-negotiable importance of antenatal care to detect and treat maternal infections, demonstrating essential hygiene practices for birth and postnatal care, and crucially, teaching parents to recognize specific neonatal danger signs—such as grunting, chest in-drawing, and fast breathing as indicators of respiratory distress—with a clear and imperative directive for immediate care-seeking. This aligns with the study's earlier assertion that effective health messages must be "practical oriented" and "relevant and direct to the issue."

While providers correctly acknowledge the role of health communication in raising awareness (Table 3), the study's findings suggest that a more transformative and strategic approach is urgently required. Awareness is merely the first step; it must be the catalyst for action. The current model, as evidenced by its infrequency, appears to be passive and reactive. Communication must evolve from mere information dissemination to become **persuasive, action-oriented, and empowering.** It must be designed to directly address the dependency needs of the population by providing clear, credible, and actionable guidance that can be seamlessly integrated into daily life. This involves crafting messages that not only inform but also motivate, by leveraging culturally resonant narratives and demonstrating tangible benefits, as suggested in the literature review (U.S. Department of Health and Human Services, 2000). Therefore, the solution is not just to communicate *more often*, but to communicate *more effectively*—shifting from a one-way transmission of information to a dialogic process that empowers parents as informed partners in their children's health, ultimately fulfilling the dependency relationship predicted by the theory and creating a more resilient health communication environment.

Conclusion and Recommendations

This study concludes that while health communication is recognized as vital by healthcare providers, its execution in Imo State is inconsistent and insufficiently impactful to significantly alter the trajectory of infant mortality. The current model is reactive rather than proactive, failing to establish the frequent and persuasive dialogue necessary to empower parents and caregivers.
Based on these findings, the following recommendations are proposed:
Based on the findings of this study, it is recommended that:

1) Designers of health communication messages should be more proactive and make it more informative, educative and persuasive through encouraging pregnant and lactatingmothers to make frequent visits to appropriate physicians and health workers trained in children health challenges.
2) Improvement in health budget and private partnerships in the health sector can accelerate development in facility births and reduce infant mortality. By this development pre and post checks can be exercised with the aid of good health facilities.
3) Health communication messages should be tailored more on awareness creation on child medicare so as to improve compliance to good medicare on children.

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