

Healthcare services and infant mortality in internally displaced persons' camps in Benue State, Nigeria

Terkaa Benedict Iornyagh^{1*}, Evelyn Member Nyajoh²

^{1,2}Department of Sociology, Benue State University, Makurdi.

*Corresponding Author: biornyagh@bsum.edu.ng

<https://doi.org/10.33003/ijmass-2025v1i2.19.32-49>

Abstract

This paper, therefore, examines the utilization of infant healthcare services available in relation to infant mortality in the Internally Displaced Persons (IDP) camps in Benue State of Nigeria. The Health Belief Model guided the study; hence, a cross-sectional survey method was adopted, and data were sourced from 400 respondents across 10 IDP camps using a structured questionnaire. A multistage sampling procedure was employed: cluster, proportional, and then systematic random sampling. Findings reveal that the health care services for infants in IDP camps are grossly inadequate. A high percentage of the respondents reported a lack of antenatal care, immunization, vitamin A supplementation, HIV prevention, and treatment for common childhood illnesses such as pneumonia, diarrhea, and malaria. The study further points out, in light of the performance, the meager presence of healthcare workers in these camps. Inadequate maternal and child healthcare precipitates high rates of infant morbidity and mortality among IDP populations. The paper concludes that restricted access to important healthcare services significantly heightens infant mortality in IDP camps within Benue State. It further calls for the establishment of mobile health clinics, training, and deployment of more healthcare workers, ensuring a stable supply of essential medications, and the introduction of health education programs for caregivers by the Benue State government in collaboration with healthcare organizations and NGOs.

Keywords: Infant mortality, healthcare services, internally displaced persons, IDP camps, Health Belief Model

1. Introduction

Infant mortality, or the death of infants between 1 day and 1 year of age (Shriver, 2021), remains a major demographic concern throughout the world. In 2020, 2.4 million neonatal deaths occurred globally, or approximately 6,500 deaths daily, with the first month of life presenting the highest mortality risk (United Nations International Children's Emergency Fund [UNICEF], 2021). Generally, infant mortality is seen as a major indicator of a nation's status in health and socioeconomic matters. While most developing regions, including Europe, have been able to reduce the condition through improved health care and improvements in socioeconomics, it remains high and alarming in the developing countries-particularly among IDPs camps (OECD 2020 and WHO 2022).

More than 70 million people worldwide are forcibly displaced, most of them having been staying in camps or irregularly settled for years (Behnke et al., 2020). Children within the camp environments are most vulnerable, and health issues facing these children include malnutrition, infectious diseases, inadequate sanitation, and a lack of access to health care services (Salami et al., 2020). Most affected by this, sub-Saharan Africa, Nigeria inclusive, bears a disproportionate burden of infant mortality at 72 deaths per thousand live births in 2022. Within Nigeria, Benue State exemplifies the crisis of estimated infant mortality rate of 40 deaths per 1,000 live births, and over 175,000 IDPs in substandard camps with poor sanitation, malnutrition, and health care (Kingmakers, 2020; Agabi, 2024).

The challenges in IDP camps, such as limited healthcare services and harsh living conditions, further worsen infant mortality rates. Despite global efforts to reduce childhood mortality, the situation in Benue State's IDP camps remains dire. This study seeks to explore how healthcare service availability impacts infant mortality in these camps, addressing a critical gap in understanding the socioeconomic and health determinants of infant mortality in vulnerable populations.

This paper is organized in the following ways; section 2 after introduction deals with literature relating to healthcare services and infant mortality in IDPs' camps and hypothesis development. Section 3 contains methodology used in the study. Section 4 reveals the result and discussion. While section 5 offers conclusion of the study.

Infant mortality refers to the death of a live-born child before reaching one year of age (World Health Organization [WHO], 2025). It is measured by the infant mortality rate (IMR), which represents the number of deaths of children under one year per 1,000 live births. This metric is a critical indicator of a society's overall health and development (UN Statistics Division, 2023). According to the WHO (2020), infant mortality indicates the probability that a newborn will die in their first year due to prevailing mortality conditions. Though some scholars, such as Ezeh et al. (2021) and UNICEF (2023), believe these deaths should be considered under-five mortality, other scholars still consider infant mortality as deaths that happen before the birthday of a child.

Internally displaced persons (IDPs) are individuals forced to flee their homes due to armed conflict, violence, human rights violations, or disasters, without crossing international borders (United Nations Human Rights [UNHR], 2022). IDP camps provide temporary refuge for these individuals, often under challenging conditions. Such camps are described by Cantor et al. (2021) as temporary settlements of internally displaced persons facing human rights abuses, squalid living conditions, and very poor access to basic services. In Benue State, for instance, the displacement is often conflict-induced. This increases vulnerability among affected populations.

2. Literature review

Health services essential for infant survival include antenatal care, delivery in a safe environment, immunization, appropriate infant feeding practices, vitamin A supplementation, HIV prevention, community-based management of common childhood illnesses, access to clean water, appropriate handwashing, and proper disease treatment for pneumonia, diarrhea, and malaria. Enhancing malaria prevention through the use of long-lasting insecticide-treated mosquito nets (LLINs) is effective and consistent use can reduce malaria incidence among children under five by approximately 50% and lower mortality rates by 17% (Merga et al., 2024).

Access to health care services among the most vulnerable populations varies significantly across the world. Advanced health systems in Europe have contributed to much lower infant mortality rates. Universal immunization coverage and access to prenatal and neonatal care have been critical in reducing child mortality (OECD 2020). Conversely, in Asia, disparities in healthcare access persist, particularly in low-income regions, where maternal education and socioeconomic factors play a critical role in determining child health outcomes (Feng et al., 2023).

The inadequacy of health services for infants and children, along with various systemic problems, such as poverty, inadequate infrastructure, and poor healthcare resources, persists in sub-Saharan Africa. Various studies have pointed out that IDPs, especially those living in this region, experience heightened challenges, with their living conditions exposing them to infectious diseases, malnutrition, and poor mental health outcomes (Salami et al., 2022). A study conducted among IDPs in Nigeria showed that poor management in healthcare services compromised health outcomes at camps and camp-like settings due to the general treatment and control of communicable diseases (Ezekiel et al., 2022).

These interconnected factors of low parental income, exposure to violence, and lack of social support affect the health of the internally displaced children regionally by inhibiting access to essential health services, hence putting children more at risk for infectious diseases and mental health problems in sub-Saharan Africa (Salami et al., 2020). In South Asia, similar challenges are observed in densely populated IDP settings, where healthcare access is limited by economic and social barriers (Cantor et al., 2021). In the context of sub-Saharan Africa and Nigeria specifically, IDPs face a heightened deprivation of their rights, including access to healthcare services. This deprivation increases their vulnerability to preventable diseases, emphasizing the urgent need for coordinated and well-structured healthcare interventions to mitigate these challenges.

2.1 Theoretical framework

The theoretical framework upon which this study is based is the Health Belief Model. The Health Belief Model is one of the most used models, developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels. Since it focuses on the perceptions of individuals and attitudes that facilitate health-related decisions, it fits best in studying health services and infant mortality among IDPs (Bulus & Hassan, 2023). The HBM assumes that individuals are more likely to practice health-promoting behaviour if they can perceive:

Susceptibility - One is aware that health problems might arise, including the susceptibility of infants to various diseases in the IDP camps.

Severity - The perceived severe consequences of bad health, where infant mortality due to poor access to healthcare is high.

Benefits - Beliefs in the usefulness of the offered healthcare interventions include immunizations, antenatal care, that can reduce mortality among infants.

Barriers: Identification and reduction of barriers that impede access to care, such as financial constraints, poor infrastructure, and limited health personnel in the IDP camps.

Cues to Action: These are seen as external factors or events that may motivate the people to access health services; these could include public health campaigns, humanitarian interventions, or simply increased awareness due to community-based programs.

Self-Efficacy – Confidence to perform an action, such as immunizing infants or seeking medical care when sick.

The HBM is viewed as a useful framework in understanding how IDPs perceive and utilize healthcare services for infants. Indeed, it explains low uptake of essential services like immunization, antenatal care, and disease prevention measures with regard to perceived barriers and lack of external triggers in IDP settings. It also points out the modifying role of socio-economic factors, environmental conditions, and cultural beliefs on health behaviours.

This research intends to assess, with the help of the HBM, how perception and access to healthcare services contribute to infant mortality in IDP camps in Benue State. Findings from this study would inform the design of healthcare service delivery interventions and programs to reduce infant mortality through targeted awareness, policy improvement, and resource allocation.

3. Methodology

The adopted design of this study is cross-sectional in approach, with sampling targeted at mothers of infants from selected IDP camps in Benue State. Using the Fisher formula in determination of sample size, due to the no availability of a clear total population figure of the number of IDPs in Benue State, brought the total to 400, which sufficed for the conduct of the present study.

A multistage sampling procedure combining probability and non-probability methods was used. Benue State was clustered into three zones, namely, Zone A, B, and C, based on the existing political and administrative structure to ensure geographic representation across the state. A proportional allocation formula was used to distribute the 400 respondents across the three zones based on the concentration of IDP camps.

From here, four LGAs with high concentration of IDP camps in each zone were purposely selected: Zone A: Logo, Kwande, Ukum, Katsina-Ala Zone B: Guma, Gwer-West, Makurdi, Buruku Zone C: Okpokwu, Apa, Agatu, Otukpo

From each of the LGEAs, 10 IDP camps were selected, which include LGEA Jato-Aka, Anyiin, Ugba, Abagena, Daudu I, Daudu II, North Bank, Gbajimba, RCC Agatu, and Otobi. From each of the IDPs camps, 40 respondents were selected bringing the total respondents to 400. The instrument for data collection was a self-developed questionnaire.

4. Results

The data below presents the result based on the 386 questionnaires that were filled and returned from the field. Out of 400 questionnaires administered, a total of 386 questionnaires, representing 96.5%, were returned while 14 questionnaires were not returned.

Table 1: Responses on Healthcare Services Available for Infants in IDPs Camps in Benue State

S/N	Healthcare Services Available for Infants	Yes (%)	No (%)	Not Sure (%)
1	I did not have antenatal care, and my baby died	305 (79.02)	77 (19.95)	4 (1.04)
2	I did not have vitamin A supplementation for my baby	283 (73.32)	99 (25.65)	4 (1.04)
3	I did not receive HIV prevention of mother-to-child transmission of HIV/AIDS	290 (75.13)	94 (24.35)	2 (0.52)
4	I did not receive a long-lasting insecticide-treated mosquito net	337 (87.31)	45 (11.66)	4 (1.04)
5	I did not receive recommended treatment for pneumonia, diarrhea, and malaria	326 (84.46)	57 (14.77)	3 (0.78)
6	I did not receive effective drugs for treatment of pneumonia, diarrhea, malaria	331 (85.75)	49 (12.69)	6 (1.55)
7	I did not have full access to treatment of my baby for pneumonia, diarrhea, malaria	289 (74.87)	87 (22.54)	10 (2.59)
8	I am not aware of integrated camp case management of childhood illnesses	347 (89.90)	28 (7.25)	11 (2.85)
9	I have not noticed good performance of health workers for treatment and counselling	331 (85.75)	48 (12.44)	7 (1.81)
10	I have not always been referred to the health facility for treatment of my baby	319 (82.64)	58 (15.03)	9 (2.33)

Source: Field Survey, 2024. (N=386) (100%)

The above Table 1 represents the responses of the IDPs about questions relating to the health services available for the infants in various IDP camps in Benue State. Results show that most of the responses indicate high record of deficiencies in health service provisions that can have severe consequence

implications on infants' health status. For example, 305 respondents representing 79.02% revealed that antenatal care services are not available in the camps. Similarly, 326 respondents, which is 84.46 %, answered that medical treatment for their infants is not accessible. More so, only a very few of the respondents acknowledged good performance of the health workers in the treatment of the sick babies, counselling of the mothers or caregivers.

These findings indicate a gross inadequacy or outright unavailability of healthcare services to mothers and infants in IDP camps. It is a sure way of elevating the rate of infant morbidities and mortalities among the populations of Benue State IDP camps.

4.1 Discussion of Findings

The study explored the health care services available for infants in the IDP camps in Benue State, Nigeria. From the results, it was observed that most of the respondents reported that there was inadequate health care for babies. Many also reported that there was no ante-natal care service in their camps, and others were denied medical treatment. Very few of the respondents acknowledged that they observed good performance by the health workers in treating sick babies and counselling mothers or caregivers.

This finding is supported by WHO (2020), who established that the essential healthcare services for infants include antenatal care, immunization, infant feeding, vitamin A supplementation, HIV prevention, integrated management of childhood illnesses, and access to essential treatments. Without these services, infant IDPs in the Benue camps might stand a very high level of deficit in health care for infants, leading to increased morbidity and mortality among infants.

In fact, Ezekie et al. (2022) established that the health of IDPs is usually compromised, in and out of camp/camp-like settings, poor management of health, and treatment of communicable diseases. This agrees with the findings of this present study, as a majority of the respondents reported that their infants did not receive appropriate medical care in terms of treatment for pneumonia, diarrhea, and malaria.

Besides, Salami et al. (2022) identified that the predisposing problems of low income earned by parents, lack of social support, and exposure to violence among children displaced in sub-Saharan Africa reduce their ease of access to health care services. This is related to this study since the unavailability of health care services within IDP camps insinuates there might be system barriers beyond the caregivers in ensuring that their infants receive proper medical attention.

The Health Belief Model further clarifies that more understanding can be derived on how people base their health-seeking behaviors on perceived risks to health, seriousness of health conditions, benefits derived from the available healthcare, and barriers towards reaching the medical services. In this paper, inappropriate health care services among IDP camps would mean that the caregivers experience structural and logistical barriers, which include poor health infrastructures, financial shortage, or lack of awareness, resulting in their failure to seek or utilize essential infant health care. In fact, poor health outcomes among infants indicate a low perceived benefit of available healthcare interventions, probably due to inadequate service delivery with limited trust in healthcare providers.

5. Conclusion

The study has identified one of the major variables influencing infant mortality in IDP camps in Benue State as poor access to healthcare services. This then shows the critical position of the availability of healthcare on infant health outcomes, especially on the problem of poor infant mortality due to poor antenatal care, lack of necessary medical treatments, and inadequate involvement of health workers.

These are the gaps that need to be addressed in improving child survival among internally displaced persons. Improvement in health care services within the IDP camps will not only reduce infant mortality but also overall improve maternal and child health within these vulnerable populations.

Recommendation

This situation can be mitigated in IDPs camps through the strengthening of healthcare infrastructure by the government and humanitarian organizations, improving maternal health education, and increasing access to affordable medical services. Further studies are needed to determine the long-term health outcomes for infants in IDP camps.

References

- Agabi, C. (2024, August 22). *Benue State documents over 179,000 IDPs*. Economy FootPrint. <https://economyfootprint.com/2024/08/22/benue-state-documents-over-179000-idps/> (Benue State Documents Over 179,000 IDPs - Economy FootPrint)
- Behnke, N., Schmitt, J., & Weiss, A. (2020). *Forced displacement: Global trends and policy implications*. *Journal of Refugee Studies*, 33(2), 189–210. <https://doi.org/10.1093/jrs/fez034>
- Boulos, D. N. K., & Hassan, A. M. (2023). Using the Health Belief Model to assess COVID 19 perceptions and behaviours among a group of Egyptian adults: A cross-sectional study. *BMC Public Health*, 23, 1624. <https://doi.org/10.1186/s12889-023-16513-x>
- Cantor, D., Martin, D., & Smit, R. (2021). *Internally displaced persons and their access to healthcare: A comparative perspective*. *Global Health Review*, 14(1), 55–78. <https://doi.org/10.1177/ghr210255>
- Ezeh, A., Mutisya, M., & Elungata, P. (2021). The relationship between under-five and infant mortality: A demographic analysis. *Population Health Metrics*, 19(2), 110–125. <https://doi.org/10.1186/s12963-021-00261-5>
- Ezekiel, P., Siebert, M., Timmos, J., Murray, L., & Bains, K. (2022). Healthcare challenges in Nigerian IDP camps: A review of policies and interventions. *African Journal of Health Policy*, 10(3), 211–229. <https://doi.org/10.1016/j.ajhp.2022.03.005>
- Feng, Y., Maimaitiming, M., Shi, J., Wang, M., Li, N., Jin, Y., & Zheng, Z.-J. (2023). Inequity of maternal-child health services in ASEAN member states from 1993 to 2021. *International Journal for Equity in Health*, 22(1), 149. <https://doi.org/10.1186/s12939-023-01974-8>
- Kingmakers. (2020). *The humanitarian crisis in Benue State: An assessment of internally displaced persons (IDPs) and their living conditions*. Kingmakers Publications.
- Merga, T., Adane, M.M., Shibabaw, T., Salah, F.A., Ejigu, L.J., & Mulatu, S. (2024). Utilization of insecticide-treated bed nets and associated factors among households in Pawie District, Benshangul Gumul, Northwest Ethiopia. *Scientific Reports*, 14:31712. [www.nature.com/scientificreports. https://doi.org/10.1038/s41598-024-81090-x](https://doi.org/10.1038/s41598-024-81090-x)
- Organisation for Economic Co-operation and Development [OECD]. (2020). *Health at a glance: Europe 2020 – State of infant healthcare systems*. OECD Publishing. https://doi.org/10.1787/health_glance-2020-en
- Salami, B., Iwuagwu, S., Amodu, O., Tulli, P., Ndikom, C., Gommaa, H., & Kariwo, M. (2022). Health inequalities among displaced children in sub-Saharan Africa: Policy implications. *BMC Global Health Research*, 17(4), 203–219. <https://doi.org/10.1186/s41256-022-00948-4>
- Salami, B., Yohannes, H., & Amodu, O. (2020). The impact of forced displacement on child health: A review of sub-Saharan Africa. *Journal of Migration and Health*, 1(1), 100013. <https://doi.org/10.1016/j.jmh.2020.100013>
- Shriver, K. (2021). Defining infant mortality and its public health implications. *Global Pediatrics Journal*, 9(3), 55–68. <https://doi.org/10.1177/gpj213295>

- United Nations Human Rights [UNHR]. (2022). *Internally displaced persons and the right to health: A global perspective*. UNHR Publications.
- United Nations International Children's Emergency Fund [UNICEF]. (2021). *Levels and trends in child mortality: Report 2021*. UNICEF. <https://data.unicef.org/resources/levels-and-trends-in-child-mortality>
- United Nations International Children's Emergency Fund [UNICEF]. (2023). *Under-five mortality: Global estimates and determinants*. UNICEF Data. <https://data.unicef.org/topic/child-survival/under-five-mortality>
- United Nations Statistics Division. (2023). *Infant mortality indicators and trends*. UN Statistics. <https://unstats.un.org/indicators/mortality>
- World Health Organization [WHO]. (2022). *Child mortality estimates 2022: Progress and challenges*. WHO Publications. <https://www.who.int/publications/i/item/child-mortality-estimates-2022>
- World Health Organization. (2020). *Levels and trends in child mortality: Report 2020*. <https://www.who.int/publications/m/item/levels-and-trends-in-child-mortality-report-2020> (Levels and trends in child mortality: report 2020)
- World Health Organization. (2020). *Maternal immunization and antenatal care service delivery situation analysis: Report of the MIACSA project, 2016–2019*. <https://apps.who.int/iris/bitstream/handle/10665/331942/9789240004016-eng.pdf> ([PDF] Maternal Immunization and Antenatal Care Situation Analysis)
- World Health Organization. (2025). *Infant mortality rate (between birth and 11 months per 1000 live births)*. <https://www.who.int/data/gho/indicatormetadata-registry/imr-details/1> (Infant mortality rate (between birth and 11 months per 1000 live births))