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Socio-Economic Status of Rural Dwellers and the Accessibility of Primary Healthcare Facilities on Child Health Management in Kurmi LGA of Taraba State, Nigeria

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Abstract

Poverty, as a pervasive socio-economic factor, significantly shapes child health in rural settings. Insufficient financial resources contribute to inadequate nutrition, limited access to healthcare, and substandard living conditions. Research consistently indicates that children from impoverished backgrounds face increased risks of health challenges, including malnutrition, higher rates of infectious diseases, and developmental delays. Parental education levels play a pivotal role in child health management. Low educational attainment is often linked to reduced health literacy, hindering parents' ability to make informed decisions about their child's well-being. Objective of the study is to ascertain how socio-economic status of rural dwellers influence their accessibility to primary healthcare facilities on child health management in Kurmi LGA of Taraba State. A cross sectional survey design was adopted with Taro Yamane's formula which help the researchers in generating the sample size of the study. The study's findings revealed that income levels, educational levels, cost of primary healthcare facilities, occupational level, and the distance to primary healthcare facilities were responsible for the accessibility of primary healthcare facilities on child's health management among rural dwellers in Kurmi LGA of

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Taraba State. This implied that there were significant relationships between the socio-economic variables and accessibility of primary healthcare facilities on child health management among the rural dwellers. The study recommended that more community health workers and traditional birth attendants should be trained to provide basic health care services in rural areas, and incentives such as financial or in-kind benefits should be provided for health workers who work in rural areas.

Keywords: Socio-Economic, Rural, Dwellers, Primary, Healthcare, Child

INTRODUCTION

Globally, despite advancements in healthcare, rural communities contend with significant obstacles in accessing essential primary healthcare services. The World Health Organization (WHO) reports that nearly half of the global population lacks access to vital healthcare services, with rural areas bearing a disproportionate burden (WHO, 2019). This limited accessibility contributes to preventable child health issues, resulting in elevated mortality rates for children under five years old (UNICEF, 2019).

Even in regions with well-established healthcare infrastructure like Europe and America, rural areas confront hurdles in healthcare accessibility. Residents in these locales often encounter restricted access to primary care services, leading to delays in diagnosis and treatment (Kaiser Family Foundation, 2019). In the United States, rural populations face disparities in healthcare access, influencing child health outcomes and widening health disparities (Rural Health Information Hub, 2021).

Asia, characterized by a diverse healthcare landscape, presents distinct challenges in ensuring rural healthcare accessibility. Factors such as geographical remoteness, economic considerations, and insufficient infrastructure contribute to the complexities of accessing primary healthcare services (World Bank, 2021). Children in remote Asian regions are particularly vulnerable to preventable diseases due to the inadequacies in healthcare accessibility (World Bank, 2021).

In Africa, where healthcare disparities are stark, rural areas grapple with substantial challenges in accessing primary healthcare. Sub-Saharan Africa, in particular, exhibits the highest under-five mortality rate globally, with preventable diseases constituting a significant proportion of child deaths (UNICEF, 2020). Limited healthcare infrastructure, a

scarcity of healthcare professionals, and economic constraints characterize healthcare in rural African communities.

Within Nigeria, a nation marked by diverse healthcare dynamics, rural-urban disparities persist. The Nigerian Demographic and Health Survey (NDHS, 2018) underscores higher child mortality rates in rural areas compared to urban centers, accentuating the impact of accessibility challenges on child health outcomes. Turning attention to Taraba State, the challenges in healthcare are exacerbated by limited infrastructure, challenging terrain, and an insufficient healthcare workforce. State-specific data from the Taraba State Ministry of Health further emphasizes disparities in child health outcomes (Taraba State Ministry of Health, 2021). It is following from here that this study seek to explore on the socio-economic status of rural dwellers and the accessibility of primary healthcare facilities on child health management in Kurmi LGA of Taraba State.

Literature Review

Conceptual Clarification

- **Child Health**

Child health pertains to the overall well-being of children, encompassing their physical, mental, and social dimensions. It involves efforts to prevent, treat, and manage illnesses and conditions affecting children, as well as the promotion of healthy development and lifestyles. Child health is a comprehensive concept addressing factors such as genetics, environment, nutrition, and healthcare accessibility that collectively contribute to a child's holistic health (UNICEF, 2022). This focuses on the general state of a child's body, including growth, development, and the absence of diseases or physical impairments. It encompasses the emotional, psychological, and social aspects of a child's mental health. It involves addressing mental health challenges and fostering positive mental states; ensuring children receive the appropriate nutrients for their age and developmental stage is essential for proper growth and development; ractices such as immunizations, regular health check-ups, and screenings play a pivotal role in preventing diseases and identifying health issues early on; timely access to healthcare services, including medical professionals and facilities, is crucial for addressing health concerns promptly, and the quality of the physical and social environment, including access to clean water, sanitation, and safe living conditions, significantly impacts child health (American Academy of Pediatrics, 2022).

- **Child Health Management**

Child health management involves a systematic and comprehensive approach to safeguarding and promoting the well-being of children. It encompasses a variety of activities focused on preventing, diagnosing, treating, and managing health issues in children, addressing both physical and mental aspects. This includes routine healthcare interventions, preventive measures, and the management of specific health concerns, all aimed at ensuring optimal growth, development, and overall health. It also involves providing vaccines to shield children from preventable diseases (American Academy of Pediatrics, 2021); periodic examinations to monitor growth, development, and detect any health issues at an early stage (Centers for Disease Control and Prevention, 2021); guaranteeing appropriate nutrition for growth and development, addressing nutritional deficiencies, and promoting healthy eating habits (World Health Organization, 2022); tending to mental health concerns and fostering emotional well-being through suitable interventions and support (World Health Organization, 2022); implementing strategies to avert injuries, accidents, and the transmission of infectious diseases (Centers for Disease Control and Prevention, 2021); and ensuring timely and affordable access to healthcare services to promptly address health concerns (World Health Organization, 2022).

- **Healthcare Facility**

A healthcare facility refers to a place or institution where various healthcare services are provided to individuals. These facilities, which can include hospitals, clinics, nursing homes, and rehabilitation centers, serve the purpose of promoting health, preventing and treating illnesses, and supporting overall well-being (WHO, 2010). Healthcare facilities offer a range of medical services, encompassing diagnostics, therapy, and preventive care; trained and skilled healthcare professionals, including doctors, nurses, and allied health personnel, work within these facilities to deliver medical care; healthcare facilities are equipped with advanced medical technologies and tools to facilitate diagnostics and treatments; these institutions prioritize providing comprehensive and compassionate care to patients, addressing their physical, mental, and emotional needs; Healthcare facilities often engage in activities aimed at health promotion, including education and preventive measures, to enhance the well-being of the community (Shi & Singh, 2019).

- **Rural Dweller**

A rural dweller is an individual who lives in a rural area, characterized by a sparse population and often involved in activities like agriculture or other primary economic sectors. These individuals typically reside in non-urbanized regions, where their way of life is shaped by the surrounding agricultural or natural environment (United Nations, 2018).

Socio-Economic Status of Rural Dwellers and the Accessibility of Primary Healthcare Facilities on Child Health Management

Child health in rural areas is knottily related with socio-economic factors, emphasizing the need to comprehend how these elements shape health outcomes for children. Globally, socio-economic factors play a fundamental role in molding child health outcomes. Recognizing the intricate interplay between socio-economic status and child health, the World Health Organization (WHO) emphasizes the necessity for targeted interventions to address disparities (World Health Organization, 2017). In Europe, socio-economic factors contribute to health disparities among rural children. Studies indicate that regions with higher socio-economic status exhibit better child health outcomes, underscoring the need to address economic inequalities for enhanced child health management (Penchansky & Thomas, 1981).

In North America, including the United States and Canada, socio-economic factors, notably income disparities, significantly impact child health management. Research reveals that children from low-income families in rural areas often encounter challenges in accessing essential healthcare services, leading to disparities in health outcomes (Currie & Stabile, 2003). In South America, socio-economic factors such as economic challenges and disparities affect child health outcomes in rural regions. Initiatives aimed at poverty reduction and improving access to healthcare services are crucial to mitigate the impact of socio-economic factors on child health (Cunningham & Shah, 2019).

Asia grapples with socio-economic factors, particularly rural poverty, influencing child health. Efforts to address these challenges involve implementing comprehensive social and health policies to uplift the socio-economic status of rural communities and enhance child health outcomes (Bhatia & Cleland, 2002). In Africa, socio-economic factors, primarily poverty, are critical determinants of child health in rural areas. Economic empowerment programs, coupled with targeted healthcare interventions, are essential for improving child

health management and breaking the cycle of poverty-related health disparities (Fotso et al., 2018).

In Nigeria, a nation with diverse socio-economic landscapes, addressing child health in rural areas requires targeted interventions. Socio-economic factors, including poverty and limited access to healthcare, pose challenges. The National Health Insurance Scheme (NHIS) and other poverty-alleviation programs aim to improve child health outcomes by addressing these socio-economic determinants (National Health Insurance Scheme, 2021).

The following were addressed as the socio-economic factors that are responsible for child health management:

i. Poverty's Influence on Child Health

Poverty, a pervasive socio-economic factor, significantly shapes child health in rural settings. Insufficient financial resources contribute to inadequate nutrition, limited access to healthcare, and substandard living conditions. Research consistently indicates that children from impoverished backgrounds face increased risks of health challenges, including malnutrition, higher rates of infectious diseases, and developmental delays (Almond & Currie, 2011).

ii. Education and Health Literacy

Parental education levels play a pivotal role in child health management. Low educational attainment is often linked to reduced health literacy, hindering parents' ability to make informed decisions about their child's well-being. Studies suggest that higher maternal education is associated with improved child health outcomes, as educated parents are more likely to adopt preventive health practices and seek timely medical care (Grossman, 2006).

iii. Access to Healthcare Services

Limited access to healthcare services poses a significant challenge in rural areas, impacting child health management. Scarcity of healthcare facilities, lengthy distances to medical centers, and financial constraints can result in delayed or inadequate healthcare for children. Enhancing healthcare access through initiatives like community clinics, mobile health units, and telemedicine services is essential for addressing this issue (Probst et al., 2019).

iv. Employment and Work Conditions

The nature of employment and work conditions in rural areas can influence child health outcomes. Parents engaged in agriculture or informal sectors may struggle to balance work

responsibilities with childcare, exposing children to potentially hazardous environmental conditions. Policies supporting family-friendly work environments and social safety nets can positively impact child health in rural settings (Huffman, Rizov, & Uzun, 2014).

v. Cultural Practices and Beliefs

Cultural practices and beliefs prevalent in rural communities can significantly shape child health management. Traditional beliefs regarding healthcare, child-rearing practices, and perceptions of illness may impact the utilization of modern healthcare services. Implementing community-based interventions that respect cultural diversity while promoting evidence-based health practices is essential for improving child health outcomes (Saroha & Altarac, 2016).

Effectively addressing the intricate relationship between socio-economic factors and child health management in rural areas necessitates a comprehensive and multidimensional strategy. Approaches should encompass poverty alleviation, educational interventions, improved healthcare access, and the promotion of culturally sensitive health practices. Collaborative efforts between governments, non-governmental organizations, and local communities are imperative for implementing impactful policies and programs that foster positive child health outcomes in rural dwellings.

Theoretical Framework

Social Determinants of Health (SDH) Theory

The Social Determinants of Health theory asserts that health outcomes are not solely influenced by individual behaviors but also by broader social, economic, and environmental conditions in which individuals reside (Marmot, 2005). This theory underscores the impact of social factors such as income, education, employment, and social support on health disparities. In the aspect of healthcare accessibility and child health, SDH theory emphasizes the role of socio-economic factors in shaping health outcomes. In addition, the theory of Social Determinants of Health (SDH) posits that health outcomes are shaped not only by individual behaviors and biological factors but also by broader societal, economic, and environmental conditions. This framework underscores the influence of structural and systemic factors on health disparities.

Components of the theory

i. **Economic Stability:** Socioeconomic status, income, employment, and access to resources significantly impact health outcomes (Braveman et al., 2011).

ii. **Education:** The level of educational attainment plays a pivotal role in health, affecting knowledge, behaviors, and access to resources (Marmot, 2005).

iii. **Social and Community Context:** Factors such as social support, community engagement, and cohesion are critical determinants of health outcomes (Kawachi & Berkman, 2001).

iv. **Healthcare System:** Access to quality healthcare services, including affordability and cultural competence, is a determinant of health outcomes (Marmot, 2005).

v. **Neighborhood and Physical Environment:** Environmental aspects, such as housing conditions, access to nutritious foods, and exposure to pollutants, have an impact on health (Diez Roux & Mair, 2010).

Application of the theory to the Study

Applying the SDH theory to the study involves examining how social and economic factors influence healthcare accessibility and child health outcomes in rural areas. For instance, investigating how poverty, educational levels, and community support networks impact a family's ability to access primary healthcare services and manage child health effectively provides insights into the broader determinants at play. Above all, comprehending the social determinants of health is essential for designing interventions that address health inequities and disparities. Effective policies and interventions to improve health must consider these broader determinants.

METHODS

The study implemented a cross sectional survey design. The rationale behind the selection of this design is helped to collect useful data within a short period of time from a sample, and as well generalize the study's findings to the entire population of the study. To fully address the issues in this stgudy, both primary and secondary methods of data collection were adopted. The population for the study comprised all the occupants of Kurmi local government area of Taraba State. Cluster sampling technique was adopted to divide the study area into ten (10) clusters based on the political wards (Abong, Akwento/Boko,

Ashuku/Eneme, Baisa, Bente/Galea, Bissaula, Didan, Ndaforo/Geanda, Njuwande, and Nyido/Tosso) within the local government area. The political wards were fairly represented in the study. For a just representation, the population distribution of each of the wards was carried out to draw proportional sample out of the 400 samples drawn for the study through the help of Taro Yamane formula from the total population of 143,600 based on the National Population Commission of Nigeria projection (2022). Inferential statistical tool of Chi-square was adopted in order to determine the relationship between the independent and dependent variables. The reason for the selection of this inferential statistical tool was because it deals with two variable analysis.

RESULTS

Table 1: Ratings on socio-economic factors and the accessibility of primary healthcare facilities on child's health management among rural dwellers in Kurmi LGA, Taraba State

Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std
My present income/financial level does not allow me to access primary healthcare facilities.	302	16	10	5	31	3.88	0.987
My educational level does not permit me to seek for more awareness on the accessibility of primary healthcare facilities and child health management due to language barrier.	289	51	2	9	13	3.59	0.743
The cost of child health management at the primary healthcare facilities can't allow me to access any of the facilities.	261	70	10	11	2	4.59	0.692
My occupational level as a farmer does not allow my accessibility to any of the healthcare facilities because I only get money during harvest, so accessing any of the primary healthcare facilities is always difficult.	253	67	20	22	2	3.61	0.825
The distance to where primary healthcare facility is located cannot allow me to access it.	304	49		2	9	3.78	0.883

Source: Field Survey, 2023

The ratings on the table above showed how socio-economic status of rural dwellers affect the accessibility of primary healthcare facilities for the management of child health in Kurmi LGA of Taraba State. All the statements had the means score of above 3.50, which indicated their acceptance, and the table had the standard deviation value from 0.692 to 0.987, which showed how the variables were close to each other.

Test of Hypothesis

The hypothesis for the study was tested using Chi-square.

***Ho*:** Socio-economic status of rural dwellers have no significant relationship with the management of child health in Kurmi LGA of Taraba State.

The chi-square presents the results of a hypothesis test examining the relationship between the socio-economic factors and accessibility of primary healthcare facilities on child health management among the rural dwellers in Kurmi LGA of Taraba State. The findings indicated that there were significant relationships between the socio-economic variables and accessibility of primary healthcare facilities on child health management among the rural dwellers of Kurmi LGA of Taraba State, Nigeria. For example, educational level, occupation, annual income, and location all had statistically significant relationships the accessibility of primary healthcare facilities on child health management, as indicated by p-values lower than 0.05. Therefore, we reject the null hypothesis which states that, "Socio-economic status of rural dwellers have no significant relationship with the management of child health in Kurmi LGA of Taraba State".

Table 2: Chi-square test of hypothesis for socio-economic variables and rural dwellers access to primary healthcare facilities on child health management

Categories	**Rural Dwellers Access on Child Health Management**			**Total**
	Yes	**I Don't Know**	**No**	
Educational Level				
No formal	143(70.4%)	38(18.7%)	22(10.8%)	203(100%)
Primary	45(59.2%)	11(14.5%)	10(13.1%)	76(100%)
Secondary	14(51.9%)	5(18.5%)	8(26.6%)	27(100%)
Tertiary	13(22.4%)	10(17.2%)	35(60.3%)	58(100%)
X^2**=107.704**	**df =6**	**P=0.001**		

Occupation				
Student	6(23.0%)	5(19.2%)	15(57.6%)	26(100%)
Unemployed	10(18.5%)	8(14.8%)	36(66.7%)	54(100%)
House wife	17(36.2%)	6(12.8%)	24(51.0%)	47(100%)
Farming	102(61.4%)	10(6.0%)	54(32.5%)	166(100%)
Civil servant	29(56.8%)	7(13.7%)	15(29.4%)	51(100%)
Petty trading	8(40%)	5(25%)	7(35%)	20(100%)
X^2**=22.771**	**df =10**	**P=0.016**		
Annual Income				
50,000	32(50.7%)	18(28.5%)	13(20.6%)	63(100%)
51-100,000	81(48.7%)	27(16.2%)	58(34.9%)	166(100%)
101-200,000	25(60.9%)	11(26.8%)	5(12.9%)	41(100%)
201-300,000	39(66.1%)	9(12.2%)	11(18.6%)	59(100%)
300,000 and above	19(54.2%)	6(17.1%)	10(28.5%)	35(100%)
X^2**=23.183**	**df= 6**	**P=0.001**		
Location/distance				
Rural	108(35.2%)	40(13.0%)	158(51.6%)	306(100%)
Urban	36(62.0%)	10(17.2%)	12(20.6%)	58(100%)
X^2**=37.546**	**df= 2**	**P=0.001**		

Source: Field Survey, 2023

Based on the findings of the study, the null hypothesis which stated that "Socio-economic status of rural dwellers have no significant relationship with the management of child health in Kurmi LGA of Taraba State" was rejected. Thus, the findings of this study support the alternative hypothesis that Socio-economic status of rural dwellers have significant relationship with the management of child health in Kurmi LGA of Taraba State. This entails that socio-economic status plays significant role in the accessibility of rural dwellers of Kurmi LGA to primary healthcare facilities in respect to the management of child health.

DISCUSSION

The study findings revealed that Socio-economic status of rural dwellers have significant relationship with the management of child health in Kurmi LGA of Taraba State. This is in line with the work of Currie and Stabile (2003), who revealed that in North America, including the United States and Canada, socio-economic factors, notably income disparities, significantly impact child health management. The research reveals that children from low-income families in rural areas often encounter challenges in accessing essential healthcare services, leading to disparities in health outcomes. In South America, socio-economic factors such as economic challenges and disparities affect child health outcomes in rural regions. Initiatives aimed at poverty reduction and improving access to healthcare services are crucial to mitigate the impact of socio-economic factors on child health (Cunningham & Shah, 2019).

Asia grapples with socio-economic factors, particularly rural poverty, influencing child health. Efforts to address these challenges involve implementing comprehensive social and health policies to uplift the socio-economic status of rural communities and enhance child health outcomes (Bhatia & Cleland, 2002). In Africa, socio-economic factors, primarily poverty, are critical determinants of child health in rural areas. Economic empowerment programs, coupled with targeted healthcare interventions, are essential for improving child health management and breaking the cycle of poverty-related health disparities (Fotso et al., 2018). In Nigeria, a nation with diverse socio-economic landscapes, addressing child health in rural areas requires targeted interventions. Socio-economic factors, including poverty and limited access to healthcare, pose challenges (National Health Insurance Scheme, 2021).

According to Almond and Currie (2011), poverty, a pervasive socio-economic factor, significantly shapes child health in rural settings. Insufficient financial resources contribute to inadequate nutrition, limited access to healthcare, and substandard living conditions. Research consistently indicates that children from impoverished backgrounds face increased risks of health challenges, including malnutrition, higher rates of infectious diseases, and developmental delays (Almond & Currie, 2011). Parental education levels play a pivotal role in child health management. Low educational attainment is often linked to reduced health literacy, hindering parents' ability to make informed decisions about their child's well-being. Studies suggest that higher maternal education is associated with

improved child health outcomes, as educated parents are more likely to adopt preventive health practices and seek timely medical care (Grossman, 2006).

Probst et al. (2019), opined that limited access to healthcare services poses a significant challenge in rural areas, impacting child health management. Scarcity of healthcare facilities, lengthy distances to medical centers, and financial constraints can result in delayed or inadequate healthcare for children. Huffman, Rizov and Uzun (2014), asserted that the nature of employment and work conditions in rural areas can influence child health outcomes. Parents engaged in agriculture or informal sectors may struggle to balance work responsibilities with childcare, exposing children to potentially hazardous environmental conditions. Policies supporting family-friendly work environments and social safety nets can positively impact child health in rural settings.

CONCLUSION

The perennial challenge of ensuring equitable access to primary healthcare facilities and the efficient management of child health remains a critical concern, particularly within rural areas. In various parts of the world and African continent, rural areas are faced with substantial challenges in accessing adequate healthcare, resulting in sub-optimal child health outcomes. Despite global efforts, Sub-Saharan Africa maintains the highest under-five mortality rate globally, highlighting ongoing difficulties in healthcare access and child health management (UNICEF, 2020). Nigeria, reflecting broader healthcare challenges, demonstrates noticeable rural-urban disparities in healthcare accessibility. Rural inhabitants, including children, face obstacles such as geographical isolation, limited healthcare infrastructure, and a shortage of skilled healthcare professionals (NDHS, 2018). These challenges contribute to higher child mortality rates in rural regions compared to urban centers. Based on the findings of this study, it was discovered that socio-economic factors play major role in the accessibility of primary healthcare facilities on child health management among the rural dwellers of Kurmi LGA of Taraba State, Nigeria.

Recommendations

The study recommended that;

- More community health workers and traditional birth attendants should be trained to provide basic health care services in rural areas.

- Incentives such as financial or in-kind benefits should be provided for health workers who work in rural areas.
- Referral system between primary healthcare facilities and secondary or tertiary care facilities should be improved.

REFERENCES

Braveman, P., Egerter, S., & Williams, D. R. (2011). The Social Determinants of Health: A Maturing Concept. *Annual Review of Public Health, 32*, 381–398. doi:10.1146/annurev-publhealth-031210-101218

Centers for Disease Control and Prevention. (2021). *Well-Child Visits*.

Cunningham, S. A., & Shah, M. (2019). Decoding socio-economic disparities in child health: A multi-country analysis. International Journal of Public Health, 64(3), 357-367.Bhatia, J. C., & Cleland, J. (2002). Socioeconomic determinants of infant mortality: A worldwide study. *Bulletin of the World Health Organization, 80*(2), 83-90.

Currie, J., & Stabile, M. (2003). Socioeconomic status and child health: Why is the relationship stronger for older children? *American Economic Review, 93*(5), 1813-1823.

Diez Roux, A. V., & Mair, C. (2010*). Communities and health. Annals of the New York Academy of Sciences, 1186(1), 121. World Health Organization. (2015). Health in rural communities: Context matters*. Retrieved from https://www.who.int/bulletin/volumes/93/3/15-152041/en/

Fotso, J. C., et al. (2018). Socioeconomic inequalities in early childhood malnutrition and morbidity: Modification of the household-level effects by the community SES. *Health & Place, 49*, 7-15.

Grossman, M. (2006). *Education and Nonmarket Outcomes. In E. A. Hanushek & F. Welch (Eds.), Handbook of the Economics of Education* (Vol. 1, pp. 577–633). Elsevier.

Huffman, S. K., Rizov, M., & Uzun, V. (2014). The Rise of Obesity in Transition Economies: Theory and Evidence from the Case of Croatia. *Journal of Development Studies, 50*(10), 1379–1395.

Marmot, M. (2005). Social determinants of health inequalities. *The Lancet, 365*(9464), 1099-1104. doi:10.1016/S0140-6736(05)71146-6

National Health Insurance Scheme. (2021). *About NHIS*.

NDHS. (2018). *Nigeria Demographic and Health Survey 2018*. National Population Commission, Federal Republic of Nigeria.

Saroha, E., & Altarac, M. (2016). Sibling Composition and Child Health: Evidence from South Asia. *Social Science & Medicine, 166*, 87–95.

Shi, L., & Singh, D. A. (2019). *Delivering Health Care in America: A Systems Approach (7th ed.)*. Jones & Bartlett Learning.

Taraba State Ministry of Health. (2021). *Health Statistics Report 2021*. Taraba State Government, Nigeria.

UNICEF. (2022). *Child Health in Rural Areas: A Global Perspective*. UNICEF.

UNICEF. (2019). *Levels and Trends in Child Mortality*.

UNICEF. (2020). *Under-five mortality*. [Link](https://data.unicef.org/topic/child-survival/under-five-mortality/)

World Health Organization. (2007). *Community health workers: What do we know about them? The state of the evidence on programs, activities, costs and impact on health outcomes*. World Health Organization.

World Health Organization. (2010). *The World Health Report 2010 - Health Systems Financing: The Path to Universal Coverage*.

World Health Organization. (2017). *Social determinants of health*. World Health Organization.

World Health Organization. (2019). *Primary Health Care on the Road to Universal Health Coverage: 2019 Monitoring Report*. World Health Organization.

World Bank. (2021). *World Bank Country and Lending Groups*.

World Health Organization. (2022). *Child health*.