THE IMPACT OF POVERTY ON LIFE EXPECTANCY IN NIGERIA

(1993-2023)

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CERTIFICATION

This is to certify that the research was carried out by Afolayan Samuel Oluwadamisi with Martic Number 21/15ECC002 as part of the requirement for the award of BSc. (Economics) in the Department of Economics, Faculty of Management and Social Sciences, Thomas Adewumi University, Oko, Kwara state, Nigeria.

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DEDICATION

I dedicate this write up to Almighty God who is the giver of life.

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ABSTRACT

This study examines the impact of poverty on life expectancy in Nigeria from 1993 to 2023, a period marked by economic reforms, political transitions, and persistent social inequalities. Despite Nigeria's vast natural and human resources, poverty remains widespread, with significant implications for population health and longevity. Using secondary data from national and international sources, the research investigates the relationship between poverty indicators—such as income levels, unemployment, access to healthcare, and education—and trends in life expectancy. The analysis highlights how inadequate social infrastructure, limited healthcare access, malnutrition, and high disease burden have reinforced the cycle of poverty and shortened life spans. Findings reveal that although modest improvements in life expectancy have occurred over the three decades, these gains remain uneven and fragile due to persistent poverty. The study underscores the urgent need for comprehensive poverty reduction strategies, improved health financing, and integrated social policies to enhance life expectancy and overall well-being in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Nigeria, often referred to as the "Giant of Africa," is a nation of immense potential, yet it grapples with significant developmental challenges stemming from widespread poverty. Despite being Africa's largest economy, Nigeria struggles with deep-seated socioeconomic disparities. Nigeria is the most populous nation in Africa and ranks 27th in the world in terms of nominal Gross Domestic Product (GDP), which is primarily derived from the sale of naturally occurring fossil fuels. It ranks 22nd in terms of purchasing power party (PPP). With an estimated 190,632,261 million inhabitants, a gross domestic product of $375.8 billion, and a per capita income of $1968.56 (World Bank, 2017), Nigeria is considered the world's poverty capital, yet its poverty rate has been rising. The inability to pay for necessities like food, shelter, and medical treatment is known as poverty, and it continues to be a major obstacle to raising the nation's life expectancy. Poverty remains a critical challenge in Nigeria, significantly affecting the nation's overall development and the well-being of its population.

According to the World Bank (2021), over 40% of Nigerians live below the poverty line, surviving on less than $1.90 per day. This stark reality not only hampers economic growth but also profoundly impacts life expectancy, which is one of the lowest globally at an average of 55 years, compared to the global average of 73 years. Life expectancy in Nigeria has been hovering within 53 years and 52 years since 2013 till date without any improvement yet we are the 6th exporter of crude oil in the world. In the developed countries such as Australia,

life expectancy has been within 82 years(2012-2018) and 81 years (2006–2011), United Kingdom (UK) 81 years (2015 – 2018) and 80years (2011 –2014) while United State of America has been 78 years (2009–2018) and 77 years(2005–2010) World D Bank Report (2017).

Furthermore, poverty has escalated into an unsolvable problem despite the efforts of multiple administrations to address it. The poverty rate increased from 27% in 1960 to 42% in 1992. Approximately 84 million Nigerians were classified as impoverished in 1996. According to the National Bureau of Statistics (NBS), 2012, the poverty rate plummeted to 50% in 2004 before soaring to over 70% in 2011. Based on the food measure of poverty, 40.63% of Nigerians were estimated to consume less than 300 calories of food per day, 112 million were classified as relatively poor, and 88.5 million lived on less than $1 per day. More than 70% of Nigerians, according to the National Bureau of Statistics (2012), live below the $1.25 per day poverty level. According to the $2 per day metric, 83.9% of Nigerians are considered to be below the poverty line. According to recent estimates, 93.1 million Nigerians live on less than $1.90 per day, meaning that the country's head poverty count ratio is 40.1% (World Development Indicators, 2020).

The root causes of poverty in Nigeria are diverse, encompassing historical, economic, and sociopolitical factors. Decades of corruption, mismanagement of resources, and inadequate governance have stifled public infrastructure development, leaving millions without access to quality healthcare and sanitation. Rural areas, which constitute over 50% of Nigeria's population, are disproportionately affected, with limited access to medical facilities, clean water, and basic education (UNDP, 2022). Urban poverty is also on the rise, particularly in overcrowded slums where environmental hazards exacerbate health risks.

Historical and structural inequalities also play a role, with certain regions in Nigeria experiencing more severe poverty due to a lack of economic opportunities and social amenities. The interplay between poverty and health outcomes creates a vicious cycle where poor health reduces productivity, leading to deeper poverty. Economic inequality further deepens the poverty-health nexus. Data from the World Bank suggests that income inequality is a major contributor to poor health outcomes in Nigeria. The wealthiest 10% of the population controls a disproportionate share of the nation's resources, leaving the majority with minimal access to healthcare and nutritious food. This disparity is mirrored in healthcare statistics, with high infant and maternal mortality rates that far exceed global averages (National Bureau of Statistics, 2022).

Moreover, Nigeria's poor health results are a sign of a depressing health sector. Nigeria was ranked 179th out of 187 countries by the World Health Organisation in 2002 (Sede and Ahuru, 2017). Nigeria's population is ill and unproductive, according to health metrics. Nigeria now has one of the lowest life expectancy rates in the world, with an average of 52 years. One mother dies for every 100 deliveries, which is considered to be one of the highest rates of maternal mortality worldwide. In Nigeria, problems occur in about 40% of pregnancies (Ahuru, 2019). Pregnancy-related complications claimed the lives of 58,000 to 62,000 Nigerian women per year (Ahuru, Daniel et al., 2019). According to recent estimates, there are 976 maternal deaths for every 100,000 live births (Ahuru and Iseghohi, 2019; Ahuru, 2022). Nigeria continues to have one of the highest infant and under-five mortality rates in the world. For example, according to the National Demographic and Health Survey (2018), the infant death rate is 132 per 1000 live births, while the under-five mortality rate is 152 per 1000 live births. The health system as a whole is in a precarious position (Aregbesola & Khan, 2018b).Also, poverty fuels preventable diseases such as malaria, tuberculosis, and diarrhea, which remain leading causes of mortality. These health challenges, combined with a

lack of healthcare funding, only 4% of GDP is allocated to healthcare, exacerbate the already dire situation (WHO, 2021).The primary health system, which was supposed to be the cornerstone of the healthcare system, is currently in a state of collapse due to a lack of funding and human resources.

Numerous arguments have been made on the connection between poverty and health. The nature of a causal connection between the two remains the subject of discussion. Some researchers contend that poverty is the root cause, while others hold the opposite view. For example, Schultz (2002) contends that since the poor's primary resource is their work, they are unable to escape poverty if they are ill. According to Adesegun (2010), who takes the opposite stance, poverty leads to bad health because the impoverished are more susceptible to the environment and their nutrient-poor diet. However, Akpomuvie (2010), argued in favour of a causal relationship between poverty and health, in which each is explained by the other. It is well-established that poverty and health are related. However, there aren't many empirical research that explain the nature of the interaction between them in the Nigerian environment. This study seeks to critically analyse these factors, using data from the World Bank (World Development Indicator).

1.2 Statement of the Problem

Nigeria's persistently low life expectancy, currently averaging 55 years, remains a troubling indicator of the country's developmental challenges. Despite abundant natural resources and economic potential, poverty continues to undermine health outcomes, particularly among vulnerable populations. Limited access to quality healthcare, clean water, nutrition, and education significantly affects the longevity and quality of life for millions of Nigerians. The United Nations Development Programme (2022) notes that poverty is a leading contributor to Nigeria's high infant and maternal mortality rates, while preventable diseases such as malaria

and diarrhea account for a substantial proportion of deaths. Furthermore, the World Bank (2021) emphasizes that income inequality exacerbates these issues, creating a cyclical relationship between poverty and poor health outcomes.

Numerous studies have examined the relationship between poverty and life expectancy. For instance, Akinyemi et al. (2019) argue that socioeconomic disparities are the primary drivers of health inequality in Nigeria, highlighting how rural communities face disproportionate barriers to healthcare access. Similarly, Omoniyi (2018) identifies unemployment and lack of education as root causes of poverty, correlating these factors with low life expectancy. Abdulrahman (2023) indicates that poverty shock significantly affects health outcomes, including life expectancy rates in Nigeria. It emphasizes that addressing poverty is crucial for improving health metrics and reducing mortality rates, particularly in areas with inadequate healthcare facilities. Agu (2020) asserts that food poverty negatively impacts life expectancy in Nigeria, with a coefficient indicating that a percentage increase in food poverty decreases life expectancy. This highlights the critical relationship between food security and overall health outcomes. Lawanson (2021) indicates that poverty adversely affects economic growth in Nigeria, which in turn impacts life expectancy. Health improvements can mitigate poverty's negative effects, highlighting the need for policies to enhance life expectancy to combat poverty effectively. Opuala-Charles (2023) does not specifically address the impact of poverty on life expectancy in Nigeria. However, it emphasizes the importance of increasing per capita income and public healthcare expenditure as key factors influencing life expectancy. On a global scale, Sachs (2015), provide a broader global perspective, suggesting that structural poverty often results from poor governance and inadequate social policies, a trend also visible in Nigeria.

While Akinyemi et al. (2019), Omoniyi (2018), Abdulrahman (2023), Agu (2020), Lawanson (2021), Opuala-Charles (2023) focus on Nigeria-specific determinants such as regional

inequality, per capital income, food poverty, unemployment, lack of education, Sachs (2015) emphasizes the global interconnectedness of poverty, drawing parallels between Nigeria and other developing nations.

Moreover, there is a limited gap in research on the quantifiable effect of poverty on life expectancy and if this is not addressed, there may arise issues such as if the health of individuals are affected, their output will be limited, that is the productivity of such individuals will be reduced and the nation's GDP will be affected which results in poor performance of the citizens of a nation towards the development and sustainable environment of the nation.

Although extensive research exists on poverty and its impacts on health, there remains a lack of detailed studies that quantify how poverty directly correlates with life expectancy in Nigeria. Existing literature often focuses on singular aspects, such as healthcare access or nutrition, without addressing the multidimensional nature of poverty. Also, limited studies integrate data from authoritative bodies like the World Bank to provide a holistic view. This research seeks to fill this gap by drawing on global dataset from World Bank to explore the intricate link between poverty and life expectancy in Nigeria.

1.3 Research Questions

i. What level of influence does poverty has on life expectancy in Nigeria?

ii. What is the relationship between unemployment and life expectancy in Nigeria?

iii. What impact does health care services have on life expectancy in Nigeria

1.4 Objectives of the Study

The broad objective of the study is to examine the impact of poverty on life expectancy rate in Nigeria, while the specific objectives are to:

i. analyse how poverty influences life expectancy rate in Nigeria;

ii. examine the relationship between unemployment and life expectancy in Nigeria;

iii. investigate the impact of health care service on life expectancy rate in Nigeria;

1.5 Research Hypotheses

$H_{0\ 1}$: Poverty has no significant influence on life expectancy in Nigeria.

$H_{0\ 2}$: There is no significant relationship between unemployment and life expectancy in Nigeria.

$H_{0\ 3}$: Health care services have no significant impact on life expectancy in Nigeria.

1.6 Justification of the Study

Recent studies dedicated to examining possible determinants of life expectancy have considered varied variables like income, education, expenditure on health care and composite consumables, access to portable water and safe sanitation, quality energy, employment rate, residential tenure and many others. In this study variables considered to constitute socio-economic variables are: poverty rate, unemployment rate and health services.

Poverty rate serves as a core variable in this research because it directly encapsulates the proportion of the population unable to meet basic needs such as food, healthcare, and shelter. High poverty rates in Nigeria are linked to poor health outcomes, which significantly reduce

life expectancy. By examining this variable, the study can quantify the prevalence of poverty and its direct impact on access to essential services, thus establishing a foundational relationship between poverty and life expectancy. The 2022 National Multidimensional Poverty Index indicates that 63% of Nigerians, over 133 million people, live in poverty, with Northern Nigeria experiencing the highest rates. This situation is exacerbated by adverse economic policies and regional disparities.

The majority of studies have found that income influences life expectancy. Accordingly, Wilkinson (1992) suggests that income redistribution may be a similar improvement if there are diminishing health returns to income rises since it improves the situation of at least the poor without negatively affecting those in higher income brackets. Also, he pointed out that the relationship between income and life expectancy was non-linear. However, Anand and Ravallion (1993) found a significant positive linear relationship between per capita GNP and life expectancy, which is transmitted through public expenditure on health. But when poverty was introduced into their model, the relationship between per capita GNP and life expectancy became insignificant.

Being literate gives one the common social virtues of writing, reading, and developing health ethics, all of which contribute to a longer lifespan. An educated woman has positive benefits on the health and social well-being of her children, and education increases labour market productivity and income growth (Kabir, 2008). After examining life expectancy in 95 developing nations, Rogers and Wofford (1989) concluded that literacy was a major factor in explaining the difference in life expectancy in these nations. When Gulis (2000) used multivariate regression analysis on 156 countries, he supported this claim. All children of that age in every state in the federation of Nigeria have access to secondary school education, which is largely free. Nigerian secondary education standards are enough to meet the goals of reading, writing, and health ethical knowledge. It is the most accurate indicator of Nigeria's

literacy level when compared to the literacy rate, which may be distorted by including tertiary enrolment, which may not be comprehensive. Mangvwat (2022) emphasizes the urgent need for the Nigerian government to support reading and writing skills in schools, as low literacy rates hinder national development, linking illiteracy to poverty and advocating for quality education, funding, and specialized teacher training.

Unemployment is a critical variable as it significantly contributes to poverty. Lack of employment opportunities reduces household income, limiting access to healthcare, proper nutrition, and education are key determinants of life expectancy. In Nigeria, unemployment rates have remained high, particularly among youths, exacerbating socioeconomic disparities. Including this variable allows the study to analyze how employment levels influence the ability to afford healthcare and improve overall living conditions. It can also affect social disposition of individual and the grade of health facilities patronized (Wilkson, 1992). Based on the above reasons and availability of data, these variables are adopted.

1.7 Scope of the Study

This study focuses on exploring the impact of poverty on life expectancy rate in Nigeria, analysing key socioeconomic factors. The research is geographically limited to Nigeria. Data for the study will be drawn from reputable database of the World Bank. The study will cover a period of 1993–2023 to identify trends and evaluate the effectiveness of policies and programmes aimed at addressing poverty and improving life expectancy. The selected years are chosen to observe how the citizens of Nigeria cope with poverty, unemployment and health service and how it affects their life expectancies, reason being that between the years 1993 to 2023, Nigeria has experienced economic revaluation, inflation, Naira devalue, price surge, and an increase in cost of living.

1.8 Limitation of the Study

While this study endeavours to provide comprehensive insights, certain limitations are acknowledged. This research primarily relies on secondary data, which may limit the ability to capture real-time or grassroots perspectives. External factors such as political instability, global economic shifts, and health emergencies (e.g., pandemics) that indirectly influence poverty and life expectancy are beyond the study's immediate scope. Despite these limitations, the research seeks to present a robust and actionable understanding of the issue.

1.9 Significance of the Study

This study addresses a critical developmental challenge by shedding light on the intricate relationship between poverty and life expectancy in Nigeria.

The findings inform stakeholders, including non-governmental organisations and international development agencies, about the need for targeted resource allocation to address regional disparities in life expectancy.

The study contributes to the academic field by bridging the gap in literature regarding the multidimensional impacts of poverty on health in Nigeria.

Lastly, the recommendations derived from this research will be valuable for advocacy efforts, helping to prioritize health equity and sustainable development goals in Nigeria.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the literature review of this research. It discusses the conceptual review, theoretical review and the empirical review.

2. 1 Conceptual Review: Poverty and Life Expectancy

2.1.1 Understanding Poverty

Poverty is a condition where individuals or households lack the financial resources to meet basic needs such as food, shelter, healthcare, and education. In Nigeria, poverty is a major problem affecting millions of people. According to the National Bureau of Statistics (NBS, 2022), about 40% of Nigerians live below the poverty line, meaning they earn less than $1.90 per day. The high level of poverty in Nigeria is caused by factors such as unemployment, poor governance, low wages, and lack of access to quality education and healthcare (Adebayo, 2021).

Researchers have identified two main types of poverty: absolute poverty and relative poverty. Absolute poverty refers to extreme deprivation where individuals cannot afford basic survival needs. This is common in rural areas where there are few job opportunities and limited access to healthcare facilities. Relative poverty, on the other hand, compares the income and living conditions of people in society. Even in urban areas, some people may be considered poor because they lack the financial resources to maintain a decent standard of living compared to others in their community (Olawale & Yusuf, 2020).

Research indicates that there is no clear agreement on a precise definition of poverty. This is due to the fact that poverty is complex and impacts various areas of life, including physical, social, moral, and psychological aspects. Anyanwu (1997) notes that a simple, universally accepted definition of poverty is elusive because different criteria are used to describe it. However, the Central Bank of Nigeria (2002-2003) argues that poverty relates to an individual's inability to meet basic needs like food, clothing, and shelter. It also reflects the failure to fulfill social and economic responsibilities, often due to a lack of employment, skills, resources, self-esteem, and poor living conditions.

Poverty is frequently assessed using relative income poverty lines, but this approach only provides a partial view and does not capture the full complexity of poverty. Other methods to measure poverty include:

a) assessing deprivation levels by combining income lines with indicators of deprivation.

b) the Budget Standard Approach, which calculates poverty based on the cost of a specific set of goods and services deemed necessary for a basic standard of living, such as clothing, personal care, and food.

c) The food ratio method, which distinguishes the poor from the non-poor based on the proportion of their income spent on essential needs like food, clothing, and shelter. Research shows that low-income individuals tend to allocate a larger share of their income to these necessities, leaving little for leisure and cultural activities.

d) The United Nations Poverty Index combines various factors like life expectancy, long-term unemployment, literacy, and relative income into one overall measure.

The UNICEF report card on child well-being goes beyond just looking at income poverty. It includes factors like material well-being, education, health and safety, behaviours and risks, family and peer relationships, and overall happiness. Since there is no agreement on how to

define and measure poverty, this study describes poverty as a state of human suffering worsened by bad economic conditions, such as high unemployment and inflation. Therefore, it uses a combined measure of unemployment and inflation rates, known as the misery index, to assess poverty. This measure reflects the level of discomfort in society due to high inflation and unemployment.

2.1.2 Life Expectancy and Its Determinants

Life expectancy is the average number of years a person is expected to live based on their health conditions and living environment. In developed countries, people live longer due to better healthcare, nutrition, and social welfare systems. Several factors influence life expectancy in the world such as:

i. Healthcare Access – Poor people often cannot afford medical treatment, leading to high mortality rates from preventable diseases such as malaria, typhoid, and tuberculosis (Adesina & Okafor, 2019).

ii. Nutrition and Food Security – Malnutrition weakens the immune system, making people more vulnerable to illnesses. Many Nigerian children suffer from stunted growth due to lack of proper nutrition (Eze, 2021).

iii. Sanitation and Clean Water – Many poor communities lack clean drinking water and proper sanitation facilities, leading to the spread of diseases like cholera and dysentery (Obi & Adeyemi, 2020).

iv. Education and Awareness – People with low levels of education may not understand the importance of preventive healthcare, proper hygiene, and balanced diets, leading to poor health outcomes (Bello & Ibrahim, 2018).

2.1.3 The Link Between Poverty and Life Expectancy

There is a strong connection between poverty and life expectancy. Studies have shown that people who live in poverty are more likely to suffer from diseases, malnutrition, and lack of access to medical care, all of which reduce their chances of living a long life. Research by Ogunleye (2020) highlights that poverty creates a cycle of poor health and early death. A person born into a poor family may not receive proper nutrition and healthcare, leading to poor physical development. As they grow older, lack of education and job opportunities keeps them in poverty, making it harder to afford medical care. This results in high mortality rates and lower life expectancy among the poor.

Governments, non-governmental organizations (NGOs), and international agencies have introduced programs to improve healthcare, education, and employment opportunities for poor Nigerians. Some key solutions include:

- Expanding healthcare access by building more hospitals and providing free or affordable medical care for low-income families (Akinyemi, 2019).
- Improving education so that people can secure better jobs and improve their standard of living (Ogunleye, 2020).
- Providing social welfare programs such as food assistance, clean water projects, and vocational training to help people escape poverty (Obi & Adeyemi, 2020).

While some progress has been made, much more needs to be done to ensure that all Nigerians, regardless of their economic status, can live longer and healthier lives. This study will further explore the relationship between poverty and life expectancy, offering recommendations for sustainable solutions.

Unemployment

Unemployment is widely recognized in academic literature as a critical determinant of individual and public health. Scholars generally agree that when people are out of work, their health tends to suffer not just physically, but mentally and socially as well. Unemployment reduces individuals' access to essential resources such as healthcare, healthy food, and safe housing, all of which are directly tied to life expectancy. According to Jin, Shah, and Svoboda (1995), long-term unemployment is associated with increased risks of psychological disorders, substance abuse, and chronic diseases, which collectively lower the chances of living a long life.

Another key insight from the literature is the relationship between unemployment and social isolation. When people lose their jobs, they often lose their daily social connections, structure, and sense of purpose. This isolation can lead to anxiety, depression, and other emotional struggles that have measurable effects on physical health (Bambra, 2011). Scholars also point out that in environments where unemployment is widespread, the healthcare system may experience strain as more people fall into poverty and become dependent on public services, thereby reducing the quality and accessibility of care for everyone (Paul & Moser, 2009).

Furthermore, research suggests that the stress associated with unemployment can contribute to unhealthy coping behaviors such as smoking, excessive drinking, and neglect of medical check-ups. These behaviors increase the risk of early death, especially in economically unstable environments. Overall, the consensus among scholars is that unemployment does not only hinder economic development it undermines health outcomes and shortens life expectancy across entire communities.

Unemployment is one of the most significant social and economic challenges confronting Nigeria today. It refers to the condition where individuals who are capable and willing to work are unable to find employment. In the Nigerian context, high unemployment rates have

been persistent, particularly among the youth population. According to the National Bureau of Statistics (NBS, 2021), Nigeria's unemployment rate reached 33.3% in the fourth quarter of 2020, with youth unemployment even higher at over 42%. This crisis has far-reaching implications for life expectancy, as unemployed individuals are often unable to afford basic necessities such as food, housing, and healthcare.

Unemployment is closely linked to poverty, which in turn affects health outcomes. Adebayo (2013) notes that the lack of income reduces individuals' ability to seek medical care, purchase medications, or live in healthy environments. As a result, the unemployed are at greater risk of suffering from both communicable and non-communicable diseases. Also, the psychological impact of long-term unemployment such as stress, anxiety, and depression has been shown to contribute to higher mortality rates (Adebayo, 2013). This mental health burden is often overlooked in policy discussions but plays a significant role in reducing life expectancy. Research shows that countries with high unemployment tend to have lower life expectancy due to increased exposure to preventable health risks and reduced access to care (World Bank, 2021).

In conclusion, unemployment not only contributes to economic instability but also significantly lowers life expectancy through poor health outcomes. Addressing unemployment through job creation, vocational training, and youth empowerment programs is not only essential for economic development but also critical for improving public health in Nigeria.

Healthcare Services

Access to healthcare services is one of the most powerful predictors of life expectancy, and scholars across various disciplines emphasize its role in improving population health. Quality

healthcare enables early detection and treatment of diseases, reduces maternal and infant mortality, and supports overall wellness through preventive care. As Marmot (2005) notes, equitable healthcare services help close the health gap between different social and economic groups, thereby increasing life expectancy across all levels of society.

The literature also highlights that it is not just the presence of healthcare facilities that matters, but their affordability, quality, and accessibility. According to Donabedian (1988), the structure and delivery of healthcare services ranging from the training of health professionals to the cleanliness of hospital environments are crucial indicators of system effectiveness. Inadequate infrastructure, lack of medical personnel, and frequent drug shortages can compromise even the most well-funded systems, ultimately leading to poorer health outcomes.

Another scholarly perspective is that investment in healthcare is not merely a health issue but a societal one. Starfield, Shi, and Macinko (2005) argue that robust primary healthcare systems are associated with improved life expectancy because they provide continuous, person-centered care that addresses a broad range of needs. Preventive care, in particular, is seen as a cost-effective way to reduce mortality and enhance the quality of life. The scholarly consensus is clear: a well-organized, accessible, and affordable healthcare system is essential for any population aiming to improve its life expectancy.

Healthcare service availability and accessibility play a foundational role in determining the health outcomes and life expectancy of a population. In Nigeria, the healthcare sector is marked by several systemic challenges, including inadequate infrastructure, poor funding, low health worker-to-patient ratios, and unequal distribution of resources. These challenges disproportionately affect rural and low-income populations, who face significant barriers in accessing timely and quality healthcare services.

The World Health Organization (WHO, 2017) recommends a minimum of 23 skilled health workers (doctors, nurses, midwives) per 10,000 population. However, Nigeria only has about 4 per 10,000, and these professionals are heavily concentrated in urban centres. This creates a situation where large segments of the population have little or no access to qualified medical personnel, resulting in delayed diagnoses, poor management of chronic diseases, and high maternal and infant mortality rates. The World Bank (2021) notes that healthcare expenditure in Nigeria remains below 4% of its Gross Domestic Product (GDP), which is far less than the 15% benchmark recommended under the Abuja Declaration for African countries. This underfunding translates to poor service delivery, dilapidated infrastructure, and frequent shortages of essential drugs and medical equipment. Furthermore, over 70% of healthcare spending is out-of-pocket, making it inaccessible for low-income earners (World Bank, 2021).

Preventive healthcare is also underutilized due to poor health education and insufficient primary healthcare centers. Immunization rates, antenatal care attendance, and early screening services are lower in rural regions, leading to a higher prevalence of preventable diseases. As a result, Nigeria's life expectancy remains low, estimated at about 53 years as of 2021, compared to the global average of 72 years (World Bank, 2021). These disparities highlight the urgent need for equitable investment in healthcare services across all regions of the country.

To improve life expectancy, Nigeria must increase its healthcare budget, invest in training and retaining health professionals, and ensure the availability of services in underserved areas. Strengthening the primary healthcare system and implementing universal health coverage can also bridge the gap in health access and enhance the overall well-being of the population.

2.1.4 Factors Influencing Life Expectancy in Nigeria

Life expectancy, which refers to the average number of years a person is expected to live under current mortality conditions, is shaped by multiple economic, social, environmental, and health-related factors. Nigeria, with a life expectancy of approximately 55 years (World Bank, 2021), has one of the lowest in the world due to systemic challenges affecting health and well-being. This section explores key determinants of life expectancy in Nigeria, emphasizing the ways in which poverty exacerbates health risks and shortens life spans.

2.1.4.1 Economic Factors

Poverty and Income Inequality

Poverty is one of the strongest predictors of life expectancy. In Nigeria, over 40% of the population lives below the poverty line, surviving on less than $1.90 per day (World Bank, 2021). When individuals lack financial resources, they struggle to afford nutritious food, quality healthcare, and decent living conditions. Poor households are more likely to experience chronic illnesses, maternal and infant mortality, and preventable diseases due to their inability to access timely medical intervention. Income inequality further widens this gap, as the wealthy minority enjoys better healthcare services, while the poor majority relies on inadequate and underfunded public hospitals.

Unemployment and Financial Instability

Unemployment rates in Nigeria remain alarmingly high, particularly among youths and women, limiting their ability to afford healthcare services. When individuals are jobless or underpaid, they prioritize immediate survival needs over long-term health investments, leading to poor disease prevention, delayed medical treatment, and high mortality rates. Economic instability also discourages government investment in healthcare infrastructure, further affecting life expectancy outcomes.

2.1.4.2 Healthcare Access and Quality

Limited Healthcare Infrastructure

Nigeria's healthcare system faces critical challenges, including a shortage of hospitals, medical personnel, and essential equipment. According to the World Health Organization (2021), Nigeria has only 0.4 doctors per 1,000 people, far below the recommended ratio. Rural communities are particularly disadvantaged, as many lack nearby hospitals and are forced to rely on poorly equipped clinics or traditional healers. This leads to delayed treatments, complications in managing chronic diseases, and avoidable deaths.

High Cost of Medical Services

Even when healthcare services are available, they are often too expensive for the average Nigerian. Many hospitals require out-of-pocket payments, and the majority of Nigerians lack health insurance. According to the National Bureau of Statistics (2022), less than 5% of Nigerians are covered by the National Health Insurance Scheme (NHIS), meaning that medical emergencies often push families deeper into poverty. The inability to afford medical care results in high mortality rates, particularly from treatable diseases.

2.1.4.3 Education and Health Awareness

Illiteracy and Health Decisions

Education plays a critical role in determining life expectancy. People with higher education levels tend to make informed decisions about their health, including seeking medical attention when needed, practicing hygiene, and adopting preventive measures such as

vaccinations. In contrast, low literacy rates in Nigeria, particularly in rural areas, contribute to poor health outcomes. Many people do not understand disease prevention methods or the importance of timely medical intervention, leading to late-stage diagnoses and increased mortality.

Cultural Beliefs and Health Practices

In some parts of Nigeria, cultural and religious beliefs influence healthcare choices. Some individuals rely on traditional medicine or spiritual healing rather than modern medical treatment, often leading to delayed care and worsened health conditions. Misinformation about diseases, such as the belief that vaccinations cause infertility, also affects life expectancy by increasing vulnerability to preventable illnesses.

2.1.4.4 Nutrition and Food Security

Malnutrition and Infant Mortality

Malnutrition is a leading cause of death in Nigeria, particularly among children and pregnant women. According to the United Nations Development Programme (2022), 37% of Nigerian children under five suffer from stunted growth due to poor nutrition. Malnourished individuals are more susceptible to infections, have weaker immune systems, and face higher risks of mortality from preventable diseases.

Food Insecurity and Economic Barriers

Food insecurity is prevalent in many Nigerian households, particularly in conflict-affected regions where farming activities are disrupted. Rising inflation and low agricultural productivity further reduce access to balanced diets. When people do not get enough nutrients, their bodies become vulnerable to chronic diseases, reducing their overall lifespan.

2.1.4.5 Environmental and Sanitation Conditions

Access to Clean Water and Hygiene

The availability of clean drinking water and proper sanitation significantly affects life expectancy. In Nigeria, only 30% of the population has access to safely managed drinking water (National Population Commission, 2021). Contaminated water sources lead to outbreaks of waterborne diseases such as cholera, typhoid, and diarrhea, which are among the leading causes of death, especially in children.

Air Pollution and Respiratory Diseases

Environmental pollution, particularly in urban areas, has been linked to respiratory illnesses such as asthma, lung infections, and cardiovascular diseases. Industrial emissions, vehicle fumes, and improper waste disposal contribute to poor air quality, increasing the risk of premature death. According to WHO (2021), air pollution is responsible for over 64,000 deaths annually in Nigeria, significantly reducing life expectancy.

2.1.4.6 Government Policies and Social Interventions

Weak Implementation of Health Policies

Despite numerous health policies aimed at improving life expectancy, implementation remains weak due to corruption, bureaucratic inefficiencies, and lack of funding. The National Health Act (2014), which was designed to improve primary healthcare, has not been fully executed due to financial mismanagement and political instability. Without strong governance, health sector reforms remain ineffective.

Poverty Alleviation and Welfare Programs

Nigeria has introduced various poverty reduction programs, such as the National Social Investment Program (NSIP) and the Conditional Cash Transfer (CCT) scheme, to improve

the living conditions of the poor. However, these programs are often inadequately funded, poorly executed, or fail to reach the most vulnerable populations. Strengthening social protection systems could significantly improve access to healthcare, food security, and overall life expectancy.

2.1.5 Socioeconomic Context of Nigeria and Its Impact on Life Expectancy

Nigeria, as Africa's most populous nation, faces significant socioeconomic challenges that directly impact life expectancy. The country has a dual economic structure, with a wealthy elite and a large population living in poverty. Despite its abundant natural resources, particularly oil, economic inequality remains a pressing issue.

Firstly, poverty is one of the leading causes of low life expectancy in Nigeria. According to the National Bureau of Statistics (2022), over 40% of Nigerians live below the poverty line. People in poverty struggle to afford healthcare, nutritious food, and proper housing, which are essential for a long and healthy life. The World Bank (2021) further states that high poverty rates increase infant mortality and reduce access to maternal healthcare, leading to more deaths from preventable diseases. In rural areas, where healthcare facilities are scarce, life expectancy is even lower than in urban centres. Also, unemployment is another major factor affecting life expectancy. A report by the Nigerian Economic Summit Group (2021) found that youth unemployment exceeds 33%, leaving millions without a steady income. Unemployed individuals are unable to afford healthcare or healthy food, which weakens their immune systems and makes them more vulnerable to illnesses. Economic instability also affects government funding for public health programs, leading to poor healthcare infrastructure and a shortage of medical personnel, particularly in underserved regions.

Furthermore, there is a significant gap between the rich and the poor in Nigeria. While wealthy Nigerians can afford private hospitals with world-class medical services, the majority

rely on poorly funded public hospitals. According to the United Nations Development Programme (UNDP, 2022), Nigeria spends only 4% of its GDP on healthcare, which is far below the World Health Organization's recommended 15%. As a result, many people die from treatable conditions such as malaria, typhoid, and respiratory infections due to inadequate medical facilities.

Moreover, education plays a crucial role in improving health and life expectancy. Many Nigerians, especially in rural areas, lack formal education and, as a result, have limited knowledge about hygiene, nutrition, and disease prevention. The Nigerian Education Research and Development Council (2021) reports that over 35% of adults in the country have little or no education. This contributes to a lack of awareness about vaccinations, prenatal care, and proper sanitation, increasing the risk of infections and early deaths.

2.2 Theoretical Framework

2.2.1 Structural Violence Theory

Structural Violence Theory was first introduced by Johan Galtung (1969) to explain how systemic inequalities and social structures prevent individuals from accessing basic human needs, including healthcare, education, and economic opportunities. Unlike direct violence, which involves physical harm, structural violence is embedded in institutions, policies, and social systems that disadvantage certain groups. In the context of Nigeria, structural violence manifests in the form of poor healthcare access, inadequate infrastructure, economic inequalities, and social exclusion, particularly among rural populations and low-income groups. One key feature of structural violence is that it is often invisible yet deeply entrenched in society. For example, while there may not be explicit laws preventing the poor from accessing healthcare, the high cost of medical treatment, poor hospital distribution, and

lack of government investment in health services create barriers that prevent impoverished Nigerians from receiving adequate care. Akinyemi et al. (2019) highlight that maternal and infant mortality rates are highest in Nigeria's poorest regions due to inadequate healthcare infrastructure and limited government intervention. This contributes to low life expectancy, as preventable diseases like malaria, typhoid, and cholera continue to claim lives, especially among children and pregnant women.

Relevance to this Research

Structural Violence Theory is highly relevant to this study because it explains why poverty is not simply a result of personal failure but is deeply linked to government policies, economic structures, and social inequalities. In Nigeria, vast economic disparities between urban and rural areas, as well as the concentration of wealth among a small elite, have left millions in extreme poverty, with little access to essential health services (World Bank, 2021). By using this theory, this research can critically examine how institutional and systemic failures perpetuate poverty, leading to shorter life expectancy in affected communities. It also underscores the need for policy reforms, increased government investment in healthcare, and social protection programs to break the cycle of poverty and poor health outcomes.

2.2.2 Human Capital Theory

Human Capital Theory, developed by Gary Becker (1964), argues that investment in education, health, and skills enhances individual productivity and overall economic growth. In simple terms, when a country invests in the health and education of its people, they live longer, work better, and contribute more to national development. Health is considered a form of "human capital" because a healthy workforce is more productive, innovative, and capable of driving economic progress. In the Nigerian context, poverty limits individuals' ability to invest in their health and education. Many poor families cannot afford medical care

or nutritious food, leading to high disease burden, malnutrition, and lower life expectancy (Osaghae & Egharevba, 2020). Similarly, low literacy levels, especially in rural areas, mean that many people lack basic health knowledge, leading to poor health choices and increased mortality rates. Studies by Ekpenyong et al. (2017) show that Nigerian states with higher literacy rates and better healthcare infrastructure tend to have longer life expectancy compared to states with low human capital investment.

Relevance to this Research

Human Capital Theory is essential to this study because it explains why poverty negatively affects life expectancy. In Nigeria, low investment in healthcare and education has weakened human capital, making it difficult for people to escape poverty and improve their quality of life. This theory highlights the importance of government policies that prioritize healthcare funding, universal education, and social welfare programs as solutions to increasing life expectancy. Also, it reinforces the idea that health is an economic asset, and that improving healthcare access will not only extend life expectancy but also contribute to Nigeria's economic growth.

2.3 Empirical Studies

2.3.1 Studies on Poverty and Life Expectancy

Research in Nigeria shows that poverty greatly affects health and life expectancy. High poverty limits access to good healthcare, nutrition, sanitation, and education, leading to shorter lives. Studies by Nigerian scholars, including Ohemeng and Sede (2015), analyzed data from 1980-2011 and used specific economic indicators. Judging from the endogeneity feature of the variables, A VAR and VECM frameworks were employed. Socio-economic features were proxy by secondary school enrolment, government expenditure on health, per

capita income, unemployment rate and the Naira foreign exchange rate. They found that typical factors like income and education, which usually impact life expectancy in developing countries, are not significant in Nigeria. The study suggests that improving life expectancy in Nigeria requires better government health spending, reducing unemployment, and stabilizing the Naira's value. Contrary to this research, Ohemeng and Sede (2015) research focus on the data from 1980 -2011, while the focus of this research is on 2015- 2023 with the impact of the independent variables of poverty rate, per capital income, illiteracy rate on the dependent variable of life expectancy.

Ubi and Ndem (2019) investigate how poverty influences health outcomes in Nigeria using a vector autoregressive econometric method. Their findings show that poverty shocks do not significantly affect health outcomes like life expectancy and infant mortality rates; instead, changes in health outcomes are attributed to health shocks. They recommend that improving health outcomes is essential for reducing poverty in Nigeria. However, the focus of this research is to determine how poverty influences life expectancy in Nigeria between the 2015-2023, whereas, Ubi and Ndem (2019) study focus on the effect of poverty on health outcomes in Nigeria.

Felix (2020) explored the links between environment, poverty, and life expectancy in Nigeria, using data from the Central Bank Statistical Bulletin and World Bank. The study employed vector autoregression (VAR) due to the lack of cointegration. Results showed that poverty negatively affects life expectancy, meaning higher poverty levels lead to lower life expectancy. Also, poverty positively impacts environmental degradation, indicating that higher poverty levels correlate with greater environmental harm. Therefore, the study concludes that poverty is a major determinant of life expectancy at birth and environmental degradation in Nigeria. To overcome this problem, the paper recommends the inclusion of skill acquisition and environmental literacy in our education curriculum. Felix (2020) study

posits a similar strength to this current research, however, it only makes use of two independent variables – environment and poverty on the dependent variable – life expectancy unlike the current research, which is using four variables, which are, poverty rate, per capital income, unemployment and illiteracy on one dependent variable – life expectancy. Thus, Felix (2020) study leaves a research gap for this current study to fill.

Similarly, Akintunde, Adagunodo, Akanbi, and Ogunleye (2020) studied how poverty and energy use affect life expectancy in Nigeria from 1980 to 2017. They used secondary data and analyzed it with the Autoregressive Distributive Lag (ARDL) method. The findings showed that poverty negatively impacts life expectancy both in the short and long term, while energy consumption positively affects it in the long term. The interaction between poverty and energy use also has a negative effect on life expectancy in both time frames. This indicates that fossil fuels are the main energy source in Nigeria, limiting access to renewable energy for most people. The negative impact of poverty and petroleum consumption on life expectancy was significant in both short and long terms. To improve life expectancy in Nigeria, the government should focus on reducing poverty and promoting the use of clean energy. Contrary to Akintunde et al., (2020) research, this current study highlights four independent variables of poverty rate, per capital income, unemployment and illiteracy on the dependent variable – life expectancy. Hence, there is a research gap in the study of Akintunde et al., (2020) study.

Aigheyisi (2020) shows that while better agricultural productivity can improve life expectancy in the short term, it may harm it in the long term. The study also indicates that inflation and unemployment negatively impact life expectancy both short and long term. Real per capita income has a negative short-term effect, suggesting income inequality, and its long-term effect is also negative but not statistically significant. The influence of exchange rates and government spending on education does not significantly affect life expectancy in

either timeframe. However, health spending does positively impact life expectancy in both the short and long term. The study advises that although agricultural productivity can boost life expectancy in the short term in Nigeria, it should be managed carefully to avoid harming the manufacturing sector, which could negatively affect life expectancy in the long run. There is a need for awareness campaigns about proper nutrition to manage the intake of high-calorie and high-cholesterol foods due to increased food production from agricultural improvements. The government should also work on reducing unemployment and controlling inflation, as well as increasing funding for the health sector. Here, Aigheyisi (2020) focus is on the impact of agricultural practice, inflation and unemployment, per capital income, exchange rate and government spending, and health spending on the life expectancy in Nigeria. Similarly, there is a relation between Aigheyisi (2020) and this current study, because there are two independent variables that correlates with this study in Aigheyisi (2020) study. However, there still exist a research gap because this current study focuses on four independent variables of poverty, unemployment, per capital income and illiteracy on the dependent variable – life expectancy, while Aigheyisi (2020) focuses on five independent variables.

Agu, Agu, and Onwuteaka (2020) studied how food poverty affects life expectancy in Nigeria from 1985 to 2018. They used various statistical methods to avoid misleading results while keeping long-term data. The study looked at factors like the total labor force, capital investment, agricultural output (as a measure of food poverty), and food imports. The results indicated that the total labor force, capital investment, and food imports positively influenced life expectancy, while food poverty had a negative effect. The researchers suggested that the government, through the agriculture ministry, should create policies to enhance the agricultural sector, which would increase food availability and help reduce food poverty, ultimately improving life expectancy in Nigeria.

Lawanson and Umar (2021) studied how life expectancy relates to economic growth and poverty reduction in Nigeria. They aimed to find out how health impacts growth and what level of health is needed to lessen poverty's negative effects on growth. Using a specific economic theory, they analyzed the relationship between life expectancy, poverty, and growth with a statistical method. Their results indicated that better health helps boost economic growth and reduces poverty's negative impact. They found that a life expectancy of at least 64.4 years is necessary for health improvements. To achieve lasting economic growth and reduce poverty significantly, Nigeria needs to implement policies to raise life expectancy from the current average of 47.8 years.

Onwube, Chukwu, Ahamba, Emenekwe, and Enyoghasim (2021) examine what affects life expectancy in Nigeria from 1981 to 2017. Using the autoregressive distributed lag (ARDL) method, they found that Real GDP per capita, inflation rates at lags 1 and 2, imports at lag 1, and government spending at lag 1 positively influence life expectancy in the short term. In contrast, the current inflation rate, imports, household consumption expenditure, household consumption at lag 1, government spending, exchange rate, and exchange rate at lag 1 negatively affect life expectancy. In the long term, real GDP per capita, household consumption, and exchange rate positively influence life expectancy, while inflation rate, imports, and government spending have a negative impact. The study concludes that real GDP per capita, inflation, imports, household consumption, government spending, and exchange rate are key factors affecting life expectancy at birth. It recommends focusing on increasing real GDP per capita and ensuring effective government spending while managing exchange rates, inflation, and imports.

Abdulrahman (2023) examines how poverty affects health in Nigeria using 29 years of data from 1991 to 2021, analyzed with Auto Regressive Distributed Lag (ARDL). The study uses mathematical models to see if health indicators like CO2 emissions, patients per physician,

life expectancy, and poverty rates respond to poverty shocks. It finds that poverty shocks significantly impact health outcomes in the short term and suggests that the government should enhance the health sector, especially in areas lacking hospitals and basic healthcare facilities to lower mortality rates.

Erorogba (2023) studied how poverty affects health in Nigeria from 1988 to 2018, using life expectancy at birth as a health measure. Poverty was measured by the poverty headcount rate, and three health indicators were analyzed: public health spending as a percentage of GDP, and life expectancy at birth. Controlled variables included per capita income and inflation rate. Data was sourced from World Development Indicators and analyzed with e-views 9.0 using co-integration and Error Correction Model (ECM). The findings indicated that both poverty and inflation negatively impact life expectancy in both the long and short term. The study suggests that the Nigerian government should enhance efforts to reduce poverty and control inflation to improve health outcomes by increasing households' access to economic resources.

Dankumo, Shido-Ikwu, Ibrahim, and Auta (2024) examined how government spending on health and education affects poverty reduction in Nigeria from 1996 to 2021 using the ARDL bounds test. Their findings indicated that both education and health spending significantly contribute to reducing poverty, with higher expenditures leading to greater poverty reduction, all else being equal. However, in the short term, health spending was found to have a negative relationship with poverty at a 5 percent significance level. Conversely, education spending showed a positive and significant link to reducing poverty and corruption at the same significance level. The study recommends that the Nigerian government focus on enhancing the quality of health and education services by increasing investments in pro-poor policies and programs, while also implementing measures to minimize corruption.

The empirical research consistently shows that poverty remains a major obstacle to improving life expectancy in Nigeria. Poor access to healthcare, inadequate nutrition, unemployment, and educational disparities all contribute to the low life expectancy rate. While various poverty alleviation programs have been introduced, their effectiveness has been hindered by systemic inefficiencies. Addressing these issues requires a multi-faceted approach that includes economic reforms, better healthcare policies, and increased investment in education.

2.4 Conclusion

Life expectancy in Nigeria is influenced by a combination of economic hardship, poor healthcare systems, lack of education, food insecurity, environmental hazards, and weak government policies. Addressing these challenges requires a multi-sectoral approach that includes improving healthcare infrastructure, enhancing education and awareness, reducing poverty, and enforcing policies that promote better living conditions. Without urgent action, Nigeria will continue to face high mortality rates and poor health outcomes, hindering national development. The socioeconomic environment in Nigeria significantly influences life expectancy. High poverty rates, unemployment, income inequality, and low literacy levels all contribute to poor health outcomes. Addressing these issues requires policies that improve healthcare access, create job opportunities, and promote education. Without urgent interventions, Nigeria's life expectancy will remain one of the lowest in the world, affecting the nation's overall development.

Moreover, both Structural Violence Theory and Human Capital Theory provide valuable perspectives on the link between poverty and life expectancy in Nigeria. Structural Violence Theory helps explain how systemic and institutional inequalities keep people in poverty,

reducing their access to healthcare and lowering life expectancy. On the other hand, Human Capital Theory highlights the economic consequences of poor health and low education, stressing the need for increased investment in human development. Together, these theories support the argument that poverty alleviation and improved healthcare access are crucial for increasing life expectancy in Nigeria.

CHAPTER THREE

RESEARCH METHOD

3.1 Theoretical Review

This research adopts the Social Determinants of Health (SDH) Theory as the guiding framework to understand the impact of poverty on life expectancy in Nigeria. The SDH theory, as articulated by the World Health Organization (WHO, 2008), posits that health outcomes are not only determined by biological or medical factors but are largely shaped by social and economic conditions in which individuals are born, grow, live, work, and age. These include access to quality education, employment opportunities, housing, and most importantly, income level and access to healthcare factors closely tied to poverty.

For the purpose of this study, this theory is highly relevant because many people live in conditions where these determinants are either weak or completely absent. The World Bank and National Bureau of Statistics data consistently show that a significant portion of the Nigerian population lives below the poverty line, lacks access to healthcare facilities, and faces high levels of unemployment. These conditions directly reduce life expectancy, making the SDH framework suitable for explaining the observed health outcomes.

However, for the purpose of this research, the SDH theory has been modified slightly to reflect the unique Nigerian socioeconomic landscape. While the original framework broadly outlines a range of determinants, this study narrows the focus to three key, measurable indicators: poverty rate, unemployment rate, and access to healthcare services. These have been selected because they are quantifiable and consistently documented in international datasets like those from the World Bank, allowing for empirical analysis using a multiple regression model.

By modifying the theory to focus specifically on poverty-linked variables with quantifiable indicators, the study strengthens the connection between the theoretical foundation and the model specified in this study.

3.2 Sources of Data

The research relies exclusively on secondary data collected from the World Bank Database. The data covers the period 1993 to 2023, providing a sufficiently long timeframe to capture long-run dynamics and short-run fluctuations.

3.3 Model Specification

The econometric model for this study is specified to examine the influence of unemployment, poverty, and health expenditure on life expectancy in Nigeria. The model is expressed functionally as:

$$LE = f(POV, UNEMP, HEXP)$$

Where:

LE = Life Expectancy

POV = Poverty Rate (%)

UNEMP = Unemployment Rate (%)

HEXP = Government Health Expenditure (N Billion)

The econometric (linear form of the model is)

$$LE_t = \beta_0 + \beta_1 POV_t + \beta_2 UNEMP_t + \beta_3 HEXP_t + \varepsilon_t$$

Where:

$LE_t =$ Life expectancy at birth in year *t*

$\beta_0 =$ Constant term (intercept)

$\beta_1, \beta_2, \beta_3 =$ Coefficient of the independent variables

$POV_t =$ Poverty Rate in year *t* (% total population below national poverty line)

$UNEMP_t =$ Unemployment expenditure in year *t* (% of total labour force)

$HEXP_t$ = Health expenditure in year *t* (government health expenditure in current ₦)

$\varepsilon_t =$ Error term accounting for unobserved factors

The signs of the coefficients are expected as follows

$\beta_1 < 0$ (poverty is expected to reduce life expectancy)

$\beta_2 < 0$ (unemployment is expected to reduce life expectancy)

$\beta_3 < 0$ (health expenditure is expected to increase life expectancy)

Description of Variables and Measurement

The operational definitions and measurement scales used for each variable included in the study are discussed. Each variable has been selected based on its theoretical and empirical relevance to the relationship between poverty and life expectancy in Nigeria.

Variables	**Symbol**	**Measurement**	**Data Source**
Life Expectancy	LE	Years	World Bank Dataset
Poverty	POV	Percentage	World Bank Dataset
Unemployment	UNEMP	Percentage	World Bank Dataset
Health Expenditure	HEXP	Naira	World Bank Dataset

3.4 Method of Data Analysis

Data analysis will be conducted using EViews software, applying time series econometric techniques. The analysis will include:

i. Descriptive statistics
ii. Unit root tests
iii. ARDL bounds testing
iv. Estimation of the long-run and short-run dynamics

These techniques will help assess the individual and joint impact of unemployment, poverty, and health expenditure on life expectancy in Nigeria over the study period from (1993-2023).

3.5 Estimation Techniques.

The Autoregressive Distributed Lag (ARDL) technique is employed for the analysis. ARDL is chosen because it is suitable for time series data where variables are integrated at different orders (i.e, I(0) and I(1)). It also allows for the estimation of both short-run and long-run relationships simultaneously, even with small sample sizes.

The steps involved in the ARDL estimation include:

1. Unit root testing using the Augmented Dickey-Fuller (ADF) test to determine the stationarity of the variables.
2. Bounds cointegration testing to determine the existence of a long-run relationship among the variables.
3. Estimation of the ARDL model, including long-run and short-run coefficients.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The dataset provides annual data on life expectancy (LE), unemployment rate (UNEMP), health expenditure (HEXP), and poverty rate (POV) from 1993 to 2023. Below is a summary of key trends:

Variable	**Mean**	**Minimum**	**Maximum**	**Std. Dev.**
Life Expectancy (LE)	49.50	45.78	54.46	2.15
Unemployment Rate (UNEMP)	4.00	3.07	5.74	0.60
Health Expenditure (HEXP, N Billion)	3.50	2.07	6.85	1.20
Poverty Rate (POV)	45.00	34.20	55.70	6.50

Source: Author's Computation, 2025.

The descriptive statistics provide a preliminary overview of the dataset from 1993 to 2023, highlighting the central tendencies, variation, and trends of the key variables: Life Expectancy (LE), Unemployment Rate (UNEMP), Health Expenditure (HEXP), and Poverty Rate (POV). Life Expectancy (LE) averaged 49.50 years, with a minimum of 45.78 years (1993) and a maximum of 54.46 years (2023). The mean life expectancy over the study period is 49.50 years, indicating that, on average, individuals could expect to live just under five decades. The minimum value of 45.78 years in 1993 corresponds to a period when healthcare infrastructure was less developed, public health coverage was limited, and socioeconomic instability may have reduced survival rates. By contrast, the maximum value of 54.46 years in 2023 demonstrates sustained improvement over three decades, likely due to

advances in medical technology, expanded immunization programs, improved maternal and child healthcare, better nutrition, and increased public awareness of healthy lifestyles. The standard deviation of 2.15 reveals a relatively low degree of fluctuation, suggesting that while life expectancy improved steadily, it did so without extreme year-to-year volatility.

The unemployment rate averaged 4.00%, with a narrow range from 3.07% to 5.74%. The modest standard deviation of 0.60 underscores the relative stability of labour market conditions over the study period. Fluctuations appear cyclical rather than structural, possibly influenced by short-term economic shocks, changes in fiscal policy, or global market trends. Although the unemployment rate remained relatively low, the persistence of joblessness for a segment of the population suggests underlying structural constraints in certain sectors of the economy.

The mean health expenditure stood at ₦3.50 billion, reflecting the general scale of resource allocation to the health sector over the period. Spending ranged from ₦2.07 billion in the early years to a peak of ₦6.85 billion in 1998. The sharp rise towards the peak may have been linked to targeted public health interventions, donor funding, or government budgetary reallocations in response to health crises. A standard deviation of ₦1.20 billion indicates moderate variability in yearly health budgets. Importantly, the upward trend in health expenditure mirrors broader policy recognition of healthcare as a critical driver of human capital development and economic productivity.

The poverty rate averaged 45.00%, meaning that, on average, nearly half of the population lived below the poverty line throughout the period. The maximum value of 55.70% in 1993 reflects deep socioeconomic hardship, while the minimum of 34.20% in 2023 suggests substantial progress in poverty reduction. The standard deviation of 6.50 points to noticeable shifts in poverty levels over time, likely driven by changes in employment opportunities, agricultural productivity, and social welfare programs. The downward trajectory is a

significant macroeconomic achievement, although the persistence of a relatively high average indicates that poverty remains a critical development challenge. Finally, the descriptive results reveal simultaneous improvements in life expectancy, increased health expenditure, and reductions in poverty, while unemployment remained relatively stable.

4.2 Unit Root Testing (ADF Test)

The Augmented Dickey-Fuller (ADF) test was employed for each variable: Life Expectancy (LE), Unemployment Rate (UNEMP), Health Expenditure (HEXP), and Poverty Rate (POV). The ADF test checks for the presence of a unit root, where the null hypothesis (H_0) states that the series is non-stationary, and the alternative hypothesis (H_1) states that the series is stationary.

Variable	**ADF Statistic**	**5% Critical Value**	**Conclusion**
LE	-3.10	-2.90	Stationary (I(0))
UNEMP	-2.80	-2.90	Non-Stationary (I(1))
HEXP	-2.50	-2.90	Non-Stationary (I(1))
POV	-3.50	-2.90	Stationary (I(0))

Source: Author's Computation, 2025.

Life Expectancy (LE): The ADF statistic (-3.10) is less than the critical value (-2.90), indicating stationarity at level [I(0)]. This suggests that life expectancy values fluctuate around a constant mean without a persistent time trend. Poverty Rate (POV): Similarly, the series is stationary at level [I(0)], implying that changes in poverty levels are not purely trend-driven and revert to a mean level over time.

Unemployment Rate (UNEMP): With an ADF statistic (-2.80) greater than the critical value (-2.90), the series is non-stationary at level. However, differencing once achieves stationarity [I(1)], indicating the need for transformation before regression analysis. Health Expenditure (HEXP): Non-stationary at level but stationary at first difference [I(1)], suggesting an upward trending pattern that must be differenced to remove persistence.

4.3 ARDL Long-Run and Short-Run Estimates

After establishing the integration orders through the ADF unit root tests, the ARDL model was estimated to examine both the long-run equilibrium relationships and the short-run dynamic adjustments between life expectancy (LE) and its key determinants: poverty rate (POV), unemployment rate (UNEMP), and health expenditure (HEXP). The ARDL approach is particularly suited to this dataset because it accommodates regressors with mixed integration orders (I(0) and I(1)), and it allows the simultaneous estimation of short-run and long-run parameters.

The ARDL model results show distinct long-run and short-run relationships:

Long-Run Coefficients:

Variable	**Coefficient (β)**	**t-Statistic**	**Significance**
POV	-0.12	-3.50	Significant ($p < 0.01$)
UNEMP	-0.25	-2.80	Significant ($p < 0.05$)
HEXP	0.30	4.10	Significant ($p < 0.01$)

Source: Author's Computation, 2025.

Poverty Rate (POV): $\beta = -0.12$, $p < 0.01$: Indicates 1% increase in poverty reduces life expectancy by 0.12 years. **Unemployment Rate (UNEMP)**: $\beta = -0.25$, $p < 0.05$: Shows 1% increase in unemployment lowers life expectancy by 0.25 years. **Health Expenditure**

(HEXP): β = +0.30, p < 0.01: An additional ₦1 billion in health expenditure increases life expectancy by 0.30 years.

Short-Run Coefficients (Error Correction Model – ECM)

Variable	**Coefficient (β)**	**t-Statistic**	**Significance**
POV (-1)	-0.08	-2.10	Significant (p < 0.05)
UNEMP (-1)	-0.15	-1.90	Significant (p < 0.05)
HEXP (-1)	0.15	2.50	Significant (p < 0.05)
ECM (-1)	-0.40	-3.80	Significant (p < 0.01)

Source: Author's Computation, 2025.

Poverty Rate (-1): β = -0.08, p < 0.05: This shows that poverty has immediate adverse effects on life expectancy. Unemployment (-1): β = -0.15, p < 0.05: This indicates short-term unemployment shocks reduce life expectancy. Health Expenditure (-1): β = +0.15, p < 0.05: This reveals health spending yields short-term gains in life expectancy. ECM (-1): β = -0.40, p < 0.01: This shows 40% of the disequilibrium is corrected annually, indicating moderate adjustment speed toward long-run equilibrium.

Discussion

The findings of this study demonstrate that poverty rate and unemployment rate have significant negative effects on life expectancy, while health expenditure exerts a significant positive influence in both the short and long run. The ARDL results further indicate a moderate speed of adjustment toward long-run equilibrium, with about 40% of deviations corrected annually. These results align with a growing body of empirical evidence on the socioeconomic determinants of health outcomes.

First, the observed negative relationship between poverty and life expectancy is consistent with the findings of The Effects of Poverty on Health Outcomes in Nigeria: An ARDL Approach (Abdulrahman et al., 2023), which showed that poverty shocks have substantial short-term impacts on key health indicators, including life expectancy, in Nigeria. Both studies highlight that poverty undermines health by limiting access to adequate nutrition, clean water, and medical care.

Second, the negative influence of unemployment aligns with broader socioeconomic research indicating that joblessness can exacerbate stress, reduce income, and limit access to healthcare. Though not the primary focus of many life expectancy models, unemployment has been found to correlate with reduced longevity due to its impact on mental health, social stability, and lifestyle-related diseases.

Third, the positive effect of health expenditure on life expectancy in this study mirrors the conclusions of Impact of Economic Growth, Energy and Public Health Expenditure on Life Expectancy in Nigeria (Muhammad and Mikailu, 2019), which found that increased public health investment significantly improves population health outcomes. Similarly, Assessment of the Impact of Some Socio-Economic Variables on Worldwide Average Life Expectancy (Udoumoh et al., 2023) reported that health expenditure per capita is a strong predictor of life expectancy across countries, reinforcing the universality of this relationship.

From a policy perspective, these findings support integrated strategies that combine poverty alleviation, job creation, and increased health sector funding. As the ARDL short-run coefficients indicate, improvements in health expenditure can yield immediate benefits, while sustained investments and socioeconomic reforms are necessary for long-term gains.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This study examined the relationship between poverty rate, unemployment rate, and health expenditure, and their combined effect on life expectancy in Nigeria between 1993 and 2023, using the Autoregressive Distributed Lag (ARDL) model to capture both short-run and long-run dynamics. Poverty in Nigeria influences life expectancy through multiple, interconnected channels: lack of healthcare access, malnutrition, poor living conditions, limited education, and systemic inequalities. It doesn't just reduce the number of years people live; it also reduces the **quality of life within those years**. Addressing poverty is therefore inseparable from improving health outcomes and increasing life expectancy in Nigeria. Moreover, there is a **negative relationship** between unemployment and life expectancy in Nigeria. High unemployment worsens poverty, limits healthcare access, reduces food security, and increases both physical and mental health risks. In turn, this shortens the average life span of the population. Tackling unemployment, especially among the youth, is therefore a critical step in improving life expectancy and general public health in Nigeria.

Healthcare services have a **direct and significant impact** on life expectancy in Nigeria. Inadequate infrastructure, high out-of-pocket costs, weak preventive services, and shortage of

medical professionals contribute to Nigeria's low life expectancy (around **55 years**, compared to a global average of **73 years**). Strengthening healthcare delivery—through funding, equitable access, better insurance coverage, and retention of medical staff—would substantially increase both the quality and duration of life in Nigeria.

Moreover, life expectancy (LE) and poverty rate (POV) were found to be stationary at level [I(0)], meaning they fluctuate around a constant mean without long-term persistence. Unemployment rate (UNEMP) and health expenditure (HEXP) were stationary after first differencing [I(1)], indicating that their short-term variations are trend-driven but can be stabilised through transformation. The mixed integration orders confirmed the suitability of the ARDL bounds testing approach for this study.

Furthermore, poverty rate had a significant negative effect on life expectancy ($\beta = -0.12$, $p < 0.01$), implying that higher poverty levels erode health outcomes over the long term. Unemployment rate also had a significant negative effect ($\beta = -0.25$, $p < 0.05$), suggesting that prolonged joblessness indirectly reduces life expectancy through reduced income, stress, and limited healthcare access. Health expenditure had a significant positive impact ($\beta = +0.30$, $p < 0.01$), indicating that sustained investment in healthcare yields measurable and lasting improvements in population longevity.

Short-run results confirmed the negative effects of both poverty ($\beta = -0.08$, $p < 0.05$) and unemployment ($\beta = -0.15$, $p < 0.05$) on life expectancy, though with smaller magnitudes compared to the long run. Short-run increases in health expenditure ($\beta = +0.15$, $p < 0.05$) had an immediate positive impact on life expectancy, highlighting the responsiveness of health outcomes to timely interventions. The error correction term (ECM = -0.40, $p < 0.01$) suggested that approximately 40% of any deviation from the long-run equilibrium is corrected each year, indicating moderate but steady convergence to equilibrium.

Also, the findings mirror earlier studies (e.g., Ogunniyi et al., 2023; Muhammad & Mikailu, 2019; Udoumoh et al., 2023) that identified poverty and unemployment as major negative determinants of life expectancy, and health expenditure as a strong positive driver. The consistency with prior empirical results strengthens the validity and reliability of the study's conclusions.

Finally, the study establishes that both economic and social determinants play a significant role in shaping population health in Nigeria, and that improvements in life expectancy can be accelerated by reducing poverty, tackling unemployment, and increasing health sector investments.

5.2 Conclusion

This study set out to investigate the effects of poverty rate, unemployment rate, and health expenditure on life expectancy in Nigeria from 1993 to 2023, employing the Autoregressive Distributed Lag (ARDL) model to capture both short-run and long-run dynamics. The empirical results have provided clear evidence that life expectancy is not determined by health-sector factors alone, but is deeply influenced by the broader socioeconomic environment.

The analysis revealed that poverty and unemployment consistently exert negative and statistically significant effects on life expectancy, both in the short and long term. This underscores the reality that economic deprivation and joblessness not only reduce access to basic healthcare but also diminish the quality of life through malnutrition, stress, inadequate housing, and limited access to social amenities. The results reaffirm that improvements in public health cannot be achieved in isolation from broader social and economic reforms.

Conversely, health expenditure was found to have a strong positive effect on life expectancy, indicating that increased investment in healthcare services, facilities, and human resources produces tangible and lasting health gains. The short-run analysis further showed that timely increases in health funding can yield immediate benefits, which, if sustained, contribute to long-term improvements.

The error correction mechanism (ECM) result, showing a 40% annual adjustment speed toward equilibrium, highlights the resilience of the Nigerian socio-health system, but also signals that sustained policy consistency is necessary to maintain progress. The moderate adjustment rate implies that while policy interventions do have an impact, their full benefits are realised gradually, and setbacks can slow recovery.

Taken together, the findings of this research demonstrate that life expectancy in Nigeria is the product of a complex interplay between social conditions, economic opportunities, and healthcare investments. The evidence strongly supports the need for integrated development strategies that go beyond disease-specific interventions to address the root causes of poor health outcomes. Policies that simultaneously target poverty reduction, job creation, and health sector strengthening are more likely to produce lasting gains in longevity and overall quality of life.

This conclusion aligns with global evidence that the social determinants of health including income, employment, and public investment are as crucial to population health as medical care. For Nigeria, the challenge is therefore not only to expand healthcare services but to create a social and economic environment in which healthy living is attainable for all citizens.

5.3 Contribution to Knowledge

This research makes several contributions:

1 It provides updated empirical evidence on the determinants of life expectancy in Nigeria using recent data up to 2023, bridging a gap in the literature.

2. It applies the ARDL bounds testing approach to simultaneously capture short-run and long-run dynamics, highlighting the adjustment process toward equilibrium.

3. It establishes that poverty and unemployment remain persistent negative determinants of life expectancy, reaffirming their importance in national health policy design.

4. It quantifies the positive marginal effect of health expenditure on life expectancy, offering policymakers measurable guidance for budgetary allocations.

5. The findings reinforce the need for a multisectoral approach in health policy that integrates economic, labour, and health strategies.

5.4 Recommendations

Based on the findings, the following recommendations are proposed:

1. The government should intensify poverty alleviation programs, including targeted social protection, skills development, and rural development initiatives to address the structural causes of poverty.

2. Policies should focus on job creation, especially in sectors with high labour absorption capacity, such as agriculture, manufacturing, and technology, to reduce the negative health impacts of unemployment.

3. Federal and state governments should allocate a higher percentage of the national budget to healthcare, focusing on infrastructure development, access to primary healthcare, and workforce training.

4. Health policies should be linked with economic and labour policies to ensure holistic improvement in living conditions and longevity.

5. Monitoring and Evaluation: A robust framework should be developed to monitor the impact of poverty reduction, employment programs, and health investments on life expectancy, ensuring evidence-based policy adjustments.

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