

## **An Analytical Review of COVID-19 Pandemic and the Justification for Vaccination in Nigeria**

**Ukwuije, Chima B.**

*Directorate of Academic Collaboration and Linkages, (DACOLL)*

*Alvan Ikoku Federal College of Education, P. M. B. 1033, Owerri, Imo State - Nigeria.*

**Article DOI:** 10.48028/iiprds/ijargpgm.v4.i1.04

---

### **Abstract**

---

Once in a while in world health history, endemic and/or pandemic occurs, killing people in great numbers and drawing back the pace of world development especially the developing countries. The origin of this devastating health condition could be traced to the Antonine Plague also known as Plague of Galen, which occurred between 165 – 180AD in Rome, where up to five million people were believed to have been killed by either smallpox or measles. In the recent time, developing countries including Nigeria's economy have been set backward by pandemics, the last of it is the COVID-19 pandemic, which was argued in this paper to have been intentionally manufactured in the lab for defined objectives. Africa is among the prime target destination, but unfortunately, it did not happen as planned. The paper therefore, seeks to understand what was behind the survival of Nigerians in the midst of the pandemic and the justification for the vaccination. The study adopted the phenomenological and exploratory designs and our arguments were hinged on the propositions of the Social Theory of pandemic. Data were from the primary and secondary sources and were analysed using content analysis. The study concluded that the uncommon spread and low death rate in Nigeria and Africa is as a result of our natural body defense and ecological factors. So, it was recommended that indigenous critical stakeholders in the health sector should be engaged to source for local vaccine while we put a stop to the administration of the Oxford/AstraZeneca vaccine or make it a matter of choice based on the uncommon spread and reports of blood clot.

**Keywords:** *COVID-19, Nigeria, Pandemic, Vaccination, WHO*

---

*Corresponding Author:*      **Ukwuije, Chima B.**

### **Background to the Study**

There is no doubt that COVID-19 swiftly queued into the list of pandemics that changed world health and socioeconomic histories. This present pandemic is a game changer and a goal getter but unfortunately it hinged all of its objective on negativity. COVID-19 pandemic, as it is now, is widely, though contentiously, argued to be another conspiratorial laboratory innovation, intended to achieve some specific ends. Fervently, it has been the submissions of many scholars that for Africa, COVID-19 was manufactured purposely for three principal reasons among others: (1) To decrease African population so as to give room for expanded exportation policies with ridiculous economic returns. (2) To redirect and recondition African growth and development patterns so that it will reflect a pro-West and Western dependent design. (3) To impoverish the region more than ever by exposing her poor health sector to the pandemic and draining her economic fortune through the supply and forceful vaccination of the entire continent. These are some of the variable that the dependency theory is using to establish the causal relationship between the developed and the developing world. Nigerian and African leaders at large should not be weary of this pandemic knowing that “the relationship between the developed and the developing countries, in part, marred the development of the developing countries because of their dependency on the developed world” (Ukwuije, 2017).

It is postulated by some conspiracy scholars that COVID-19 partially achieved its objectives because as of December 15, 2022 a total of 6, 664, 515 people have died as a result of COVID-19 outbreak (Worldometer 2022). This is unacceptable because, even though it expanded the frontiers of knowledge in virology, vaccine production and encouraged deeper research and development in the field of medicine, science and technology. It also rekindled the spirit of selfless service, dedication and commitment amongst the medics and allied workers but it negatively affected virtually all aspects of human life including our natural freedom and socialisation. The number of lives it eliminated cannot be commensurate with the scientific innovations it ushered into the health sector. Noteworthy at this point is that innovation is used in in this study based on its broader span, which according to Sapru (2013) “is the development of new ideas, combining of old ideas and new ideas, adaptation of ideas from other fields, or even to act as a catalyst and encourage others to carry out innovations, also constitute innovation.

While world leaders were scampering to put more smiles on the faces of their citizens, COVID-19 on the contrary, added to the worsening economic crises and slowed down progresses channelled towards achieving the Sustainable Development Goals. It melted efforts geared towards poverty reduction and employment creation. According to Guy Ryder, the Director-General of International Labour Organisation (ILO), working poverty is back to 2015 levels; that means that when the 2030 Sustainable Development Agenda was set, we're back to the starting line (UN News 2021). At the moment, it is at the centre of nearly every health and socioeconomic discourse in the formal and informal sectors, including the academic community, where attempts are ongoing to navigate around the multisided facets of the COVID-19 pandemic, including making attempts to establish the characteristics of COVID-19 victims especially as it concerns social integration and economic rehabilitation.

Before a pandemic can be said to have occurred, there are certain health conditions that must be prevalent in the society. Chiefly, there must be an infectious disease and it is defined as disorders caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi that can be spread directly or indirectly (vector-borne) from one individual to another (Tripathi, Chen, Mizuguchi, and Morita 2019). Again, before the disease can be considered a pandemic, experts must consider the following:

1. How far has it spread? A pandemic is when an illness spans many countries or continents, or over a wide area.
2. How many people has it affected? A pandemic involves a large number of people.
3. Is it a new disease? A new illness or strain of disease often causes a pandemic. Since our bodies have little or no immunity (protection) against it, it spreads quickly (Bhargava 2020).

According to Rogers (2021a), World Health Organisation (WHO) is responsible for declaring a pandemic. WHO monitors disease activity on a global scale through a network of centres located in countries worldwide and has a pandemic preparedness plan that consists of six phases of pandemic alert? The six phases of pandemic alert are as follows:

Phase 1: The lowest level of pandemic alert; indicates that an influenza virus, either newly emerged or previously existing, is circulating among animals. The risk of transmission to humans is low.

Phase 2: Isolated incidences of animal-to-human transmission of the virus are observed, indicating that the virus has pandemic potential.

Phase 3: Characterized by small outbreaks of disease, generally resulting from multiple cases of animal-to-human transmission, though limited capacity for human-to-human transmission may be present.

Phase 4: Confirmed human-to-human viral transmission that causes sustained disease in human communities. At this stage, containment of the virus is deemed impossible but a pandemic is not necessarily inevitable. The implementation of control methods to prevent further viral spread is emphasized in affected parts of the world.

Phase 5: Marked by human-to-human disease transmission in two countries, indicating that a pandemic is imminent and that distribution of stockpiled drugs and execution of strategies to control the disease must be carried out with a sense of urgency.

Phase 6: Characterized by widespread and sustained disease transmission among humans.  
Source: (Rogers 2021b)

Having monitored the global spread and severity of the disease and observed the six phases of the pandemic alert, World Health Organisation (WHO) came to an informed conclusion and officially declared the COVID-19 outbreak a pandemic on March 11, 2020.

### **Statement of the Problem**

Ubiquitous evidences in recent times, emanating from all works of life generally agree that the world is in a socio-political and economic down-turn, which has a strong tie with the flagging wave of globalisation. James (2008) as cited in Siegel and Feijoo (2019), described the growing

opposition to it in the wake of the crisis with an associated decline in cross-border investment and international trade. According to him, continued opposition to globalisation may lead to its reform and resurgence; then international politics, trade liberalisation and the present COVID-19 pandemic. Put succinctly, Munroe, (2005) said that

*The complex, uncertain, uncharted waters of the twenty-first century have plunged us into a world of globalization, terrorism, economic uncertainty, famine, health epidemics, social transformation, corporate compromises, moral and ethical experimentation, religious conflicts, and cultural clashes. The conditions demand the highest quality of leadership that our generation can produce. Yet I have sat in the hall of government and observed the struggles of today's leaders. I have sat around the table chatting with presidents of countries, and I have heard them express their lack of ability to deal with their nations' challenges. I have talked with cabinet ministers of government around the world, and they openly ask for help, assistance, and advice. Many leaders just don't know how to lead any longer. Where are the true leaders? (. 18-19).*

“This is a deep sobering outlook, with the crisis likely to leave long-lasting scars and pose major global challenges... “Our first order of business is to address the global health and economic emergency. Beyond that, the global community must unite to find ways to rebuild as robust a recovery as possible to prevent more people from falling into poverty and unemployment” (Falsenthal, and Young, 2020). According to Chrsicaden (2020), the International labour Organisation (ILO), Food and Agriculture Organisation (FAO), International Fund for Agricultural Development (IFAD) and the World Health Organisation (WHO) in a joint statement issued in October 2020 stated that:

*... the COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and the world of work. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year (2020) (p1).*

Corroborating to this, Selassie and Hakobyan (2021), said the COVID-19 crisis is expected to undo years of economic and social progress and leave lasting scars on the region's economies. What this implies is that the number of people in sub-Saharan Africa living in extreme poverty that was estimated to have increased by more than 32 million in 2020; the number of missed school days was more than four times the level in advanced economies; and employment fell by around 8.5 percent in 2020. In terms of livelihoods, per capita income has returned to 2013 levels. In other words, all these were concise prolegomenon of the statistical details of the consequential effect of the COVID-19 pandemic. Nevertheless, there has never been a time that pandemic occurred in any part of the world without killing people in great numbers and affecting nearly all sectors of the economy of that given geographic location. Therefore, we should not expect that the present ravaging COVID-19 will be exceptional, even though it is not a welcome development.

Between March and June, 2020 there was strict lockdown of all activities in Nigeria to prevent the spread of COVID-19, which affected the economic lives of many people. The national unemployment rate which previously stood at 8.46% and 8.53% in 2018 and 2019 respectively suddenly rose to 9.71% and 9.79% in 2020 and 2021 respectively (O'Neill 2022). More than 3.8 million people, mainly working in the informal sector, according a GAVI Staff (2020) were at the verge of losing their jobs and that could have raised the unemployed population to 13 million if the movement restriction had continued for a little longer period.

More so, religious and social lives were also badly affected as people could not attend churches and mosques to worship or do religious ceremonies. Increase in unemployment rate led to decrease in income level, and consequently, prices of goods and services skyrocketed. COVID-19 led to the increased rate of crime: terrorism, kidnappings, rapping and more as more jobless youths became engaged in social vices. Above all COVID-19 killed Nigerians in great numbers. So far, the two extremes as per states in Nigeria COVID-19 statistics as of Friday, December 16, 2022 can be found in the table below:

**Table 1:** COVID -19 Statistics

Entity	No of case (Lab Confirmed)	Active Cases	Confirmed Death	Discharged Cases	Samples Tested
Nigeria	266, 381	3, 467	3, 155	259, 759	5, 708, 974
Lagos State	104, 204	1,061	771	56, 990	Highest
Kogi State	5	0	2	3	Lowest

**Source:** Adapted from: Nigerian Centre for Disease Control (NCDC) (December 16, 2022).

With reference to the number of cases so far recorded in Nigeria and the reality of the exceptional disparities in the statistics of the states as depicted above, four lines of thought have emerged, leading to four research questions:

- i. Was there COVID-19 in all parts of Nigeria?
- ii. Does COVID-19 kill people as it was advertised?
- iii. Are we being protected by natural body defence and ecological factors?
- iv. What is the justification for the forceful vaccination of all Nigerians?

### Objective of the Study

Following the above controversies and suspicions amongst Nigerian citizens, the overall objective of this study is to determine if the presence of COVID-19 in Nigeria justifies the forceful vaccination of all Nigerians. Specifically, this study seeks:

1. To determine if there was COVID-19 in all parts of Nigeria?
2. To determine if COVID-19 kills people as it was advertised?
3. To determine if we are being protected by natural body defence and ecological factors
4. To determine the justification for the forceful vaccination of all Nigerians?

### Materials and Method

Methodology and research design direct the researcher in planning and conducting the study in a way that is most likely to achieve the intended goal. It is a blueprint for conducting the



study (Burns and Grove 1998:745). Therefore, this study adopted the phenomenological methodology. The main concern of this method is to describe particular phenomena, or the appearance of things, as lived experiences (Streubert and Carpenter 1999:43). Data collection for this study was from both the primary and secondary sources. While the primary source was observation, the secondary, which was the main source of data collection was from published books, journal articles, newspapers, publications of the World Health Organisation and other international health bodies. Most of these were sourced from the internet because COVID-19 is a novel phenomenon and it is justifiably suffering from dearth of print literature. Social theory of pandemic was adopted to give a spinal support to the arguments put forward in this study. Content analysis was employed to analyse the data because the data was mainly qualitative.

### **Conceptual Framework**

Key concepts that form the bedrock of this study were in no specific order, selectively and concisely examined to create an understanding of their nature, contextual usage and relevance to the study.

### **COVID-19**

Corona Virus is a viral pandemic that affects the human respiratory system. According to Ksiazek, Erdman, Goldsmith, Zaki, Peret, Emery, (2003) and Zaki, Van-Boheemen, Bestebroer, Osterhaus, Fouchier, (2012), “prior to the emergence of the current COVID-19 pandemic, the world had witnessed the outbreak of two other  $\beta$ -coronaviruses; SARS-CoV-1 (severe acute respiratory syndrome coronavirus) in 2003 and MERS-CoV (Middle East respiratory syndrome coronavirus) in 2012.”

However, the African continent reported its first case of this COVID-19 on February 14<sup>th</sup>, 2020 in Egypt and Nigeria recorded hers on 27<sup>th</sup> February, becoming the second country in Africa with the disease (Paintsil 2020). The Nigerian Centre for Disease Control (NCDC), said that coronaviruses are zoonotic, meaning they are normally transmitted between animals and people. The coronavirus disease (COVID-19) is caused by a new strain of coronavirus (SARS-CoV-2) that has not been previously identified in humans. It was first reported to WHO on the 31st of December, 2019 in Wuhan, China. The definition above is adopted here for scholarly purposes, and on the bases that it was given by an authority, otherwise many people have still not accepted that COVID-19 was naturally transmitted from animal to human beings as revealed by investigations of WHO and some notable virologists.

### **Transmissibility of COVID -19 and the spread across the country**

COVID-19 is an infectious disease and according to Nick (2021), infectious diseases are caused by microscopic germs (such as bacteria or viruses) that get into the body and cause problems. Some, but not all infectious diseases spread directly from one person to another. Infectious diseases that spread from person to person are said to be contagious. In the present circumstances, COVID-19 could be said to be more contagious because

*The virus can spread from an infected person's mouth or nose in small liquid particles ranging from larger 'respiratory droplets' to smaller from an infected*

*person's mouth or nose in small liquid particles ranging from larger 'respiratory droplets' to smaller of, or inoculation with, the virus through the mouth, nose or eyes (WHO 2020a).*

According to a GAVI Staff (2020), all of Nigeria's 36 states have reported cases with Lagos State, home of Africa's largest city, accounting for 34% of these. Nigeria has the highest number of reported coronavirus cases, and is globally one of the African countries most affected by the COVID-19 pandemic. It has the third-highest number of reported cases on the continent following South Africa and Egypt.

### **Most vulnerable work groups**

Vulnerability in this context refers to a condition or situation in which an individual's body defense system has reduced to infinitesimal. A condition that puts one's body defence properties to cope with, resist or recover from a serious health condition at its minimal functionality. One who is vulnerable is nearly self-defenceless, save the defence is from an external source: human, material or equipment. In other words, one who is vulnerable is infectable which implies that he is at higher risk of contracting natural and/or man-made diseases. Infectability refers to one's own susceptibility to infection, germ aversion covers behaviours exerting emotional discomfort in high pathogen context, in turn deterring from the source of infection. These two pathogen avoidance tendencies jointly measure perceived vulnerability to disease (Duncan, Schaller, and park 2009).

Before one can be considered vulnerable to COVID-19, one condition must be lucidly present, which appears to answer the questions: On what basis do we consider an individual vulnerable? No one is considered vulnerable until the possibility of contacting the virus from suspected carriers, confirmed sufferers, uncontrolled and unconditioned environment, use of unsterilized medical tools and unprotected exposure to isolation centres becomes high. Based on these therefore, WHO and ILO (2021), postulated that:

*...health workers are at the front line of the COVID-19 outbreak response and as such are exposed to different hazards that put them at risk. Occupational hazards include exposure to SARS-CoV-2 and other pathogens, violence, harassment, stigma, discrimination, heavy workload and prolonged use of personal protective equipment (PPE). This document provides specific measures to protect occupational health and safety of health workers and highlights the duties, rights and responsibilities for health and safety at work in the context of COVID-19 (2).*

If the vulnerability of health workers' to COVID-19 can be determined by the likelihood of their coming into direct, indirect or close contact with a person infected with the virus, then every workplace in Nigerian is vulnerable to COVID-19. This is because direct physical contact is not only possible in hospitals or medical facilities. Wherever one can come close to each other without adequate personal protection, proper ventilation and hygiene is predisposed to contracting and transmitting, if not spreading this contagious COVID-19. This kind of places include Churches, Mosques, Banks, Business Offices, Market-places, Shops,

Malls, Recreational facilities, Commercial Busses, Clubs, Eateries, community squares, sports centres etc. The risk of occupational exposure and/or exposure to crowded places to COVID-19 is high in Nigeria owing to the fact that most people who work or do business in Nigeria do not work in isolation and Nigerians can hardly avoid crowded places.

### **Life Circle of COVID-19**

According to the Commonwealth Scientific and Industrial Research Organisation (CSIRO), as cited in CSIRO Australia (2020), SARS-CoV-2, the virus responsible for COVID-19, can survive for up to 28 days on common surfaces including banknotes, glass — such as that found on mobile phone screens — and stainless steel. Therefore, understanding how long the virus lasts in the body, and how long it can stay alive on surfaces or in the air, can help prevent transmission (Ames 2020). A study from The New England Journal of Medicine revealed that the virus would survive on various surfaces including:

- i. Copper 4 hours
- ii. Cardboard 24 hours
- iii. Plastic and steel 72 hours
- iv. in the air 3 hours

More so, Bardsley (2020), in the latest research to hit the headlines, scientists in Australia found that virus particles on surfaces could potentially remain infective for four weeks.

### **Control measure against COVID-19**

The launching of the “Take Responsibility Campaign” in February 2020 by the Nigerian Centre for Disease Control (NCDC) in collaboration with the Federal Ministry of Health and the Presidential Task Force (PTF) on COVID-19 gave rise to:

1. A total lockdown against all forms of personal and public activities involving more than 5 people
2. A ban on large gathering for indoor activities even in rural communities
3. Keeping at least 5 meters social distance
4. Compulsory wearing of face mask to cover mouth, face and chin
5. Dusk to dawn curfew (8pm – 6am)
6. Reduction of number of passengers in a bus to maintain social distance
7. Regular and thorough washing of hands with running water
8. The regular use of alcohol-based hand sanitizer and
9. Checking of temperature with infrared thermometer at public places was introduced; resulting to a situation where those whose temperatures are above 38 degrees were not allowed to draw closer and subsequently subjected to COVID-19 test.

### **Pandemic**

This is an “outbreak of infectious disease that occurs over a wide geographical area and that is of high prevalence, generally affecting a significant proportion of the world's population, usually over the course of several months. Pandemics arise from epidemics, which are outbreaks of disease confined to one part of the world, such as a single country. Pandemics, especially those involving influenza, sometimes occur in waves, so that a post-pandemic



phase, marked by decreased disease activity, may be followed by another period of high disease prevalence” (Rogers 2021b).

### History of Epidemic and Pandemics

Historical chronology of epidemics and pandemics has over the years remained controversial as most scholars quote dates that have no empirical proof. The objective of this study is not to prove with empirical evidence, the exact origin of pandemic therefore we have to adopt one definition based on the merit of its chronology and sequential flow. According to LePan (2020),

*Disease and illnesses have plagued humanity since the earliest days, our mortal flaw. However, it was not until the marked shift to agrarian communities that the scale and spread of these diseases increased dramatically. Widespread trade created new opportunities for human and animal interactions that sped up such epidemics. Malaria, tuberculosis, leprosy, influenza, smallpox, and others first appeared during these early years (p1).*

**Table 2:** A tabular history of pandemics and endemics with varying periodicity

Name	Period	Type / Pre-Human Host	Death Toll
Antonine Plague	165-180	Believed to be either smallpox or measles	5M
Japanese smallpox epidemic	735-737	Variola major virus	1M
Plague of Justinian	541-542	Yersinia pestis bacteria / Rats, fleas	30-50M
Black Death	1347-1351	Yersinia pestis bacteria / Rats, fleas	200M
New World Smallpox Outbreak	1520 – onwards	Variola major virus	56M
Great Plague of London	1665	Yersinia pestis bacteria / Rats, fleas	100,000
Italian plague	1629-1631	Yersinia pestis bacteria / Rats, fleas	1M
Cholera Pandemics 1-6	1817-1923	V. cholerae bacteria	1M+
Third Plague	1885	Yersinia pestis bacteria / Rats, fleas	12M (China and India)
Yellow Fever	Late 1800s	Virus / Mosquitoes	100,000-150,000 (U.S.)
Russian Flu	1889-1890	Believed to be H2N2 (avian origin)	1M
Spanish Flu	1918-1919	H1N1 virus / Pigs	40-50M
Asian Flu	1957-1958	H2N2 virus	1.1M
Hong Kong Flu	1968-1970	H3N2 virus	1M
HIV/AIDS	1981-present	Virus / Chimpanzees	25-35M
Swine Flu	2009-2010	H1N1 virus / Pigs	200,000
SARS	2002-2003	Coronavirus / Bats, Civets	770
Ebola	2014-2016	Ebolavirus / Wild animals	11,000
MERS	2015-Present	Coronavirus / Bats, camels	850
COVID-19	2019-Present	Coronavirus – Unknown (possibly pangolins)	2.7M (Johns Hopkins University estimate as of March 16, 2021)

**Note:** Many of the death toll numbers listed above are best estimates based on available research. Some, such as the Plague of Justinian and Swine Flu, are subject to debate based on new evidence. Source: LePan (2020).

### Vaccination

Vaccination is a simple, safe, and effective way of protecting people against harmful diseases, before they come into contact with them. It uses your body's natural defences to build

resistance to specific infections and makes your immune system stronger (WHO 2020). According to the National Centre for Immunisation and Respiratory Diseases (2012):

*Vaccines contain the same germs that cause disease. (For example, measles vaccine contains measles virus, and Hib vaccine contains Hib bacteria.) But they have been either killed or weakened to the point that they don't make you sick. Some vaccines contain only a part of the disease germ. A vaccine stimulates your immune system to produce antibodies, exactly like it would if you were exposed to the disease. After getting vaccinated, you develop immunity to that disease, without having to get the disease first. This is what makes vaccines such powerful medicine. Unlike most medicines, which treat or cure diseases, vaccines prevent them.*

WHO 2021a) says “Vaccines reduce risks of getting a disease by working with your body's natural defences to build protection? When you get a vaccine, your immune system responds.” As opined by Mandi (1983), the efficiency of vaccination as a cost-effective means of prevention has been demonstrated in many circumstances, although some limited areas of controversy remain.

The uncommon spread of COVID-19 pandemic in Nigerian without any previous vaccination or anyone saying exactly why the spread is scampering and gallivanting on the populace could cause one to say that vaccination should be made a matter of choice. This is because, the uncommon spread could be interpreted that COVID-19 does not spread as it was explained or that there is an unseen separator in the body system of Nigerians/Africans. However, we must not forget that, even though vaccination is free here, it is somebody's business out there and every means possible must employed to ensure that profit is maximised. As of December 2021, Africa was facing a US\$1.3 billion shortfall for operational costs, including cold-chain logistics and travel costs and payment for vaccinators and supervisors as well as a looming shortage of syringes and other crucial commodities (WHO Africa 2021). These and more including the vaccine itself raise unquestionable income for some people.

In this light therefore, vaccination should not be seen as the only remedy to COVID-19 pandemic; it could be a tactical approach to making African men wethers (*castrated*) because it's been a long time, those greedily interested in Africa natural resources started making effort to reduce African population especially children and the youth, the people that have the potentiality to 'stop the steal'. They see them as an encumbrance to their self-made-easy access to African natural deposits. Justification for this assumption is the purpose and outcome of the first major international population conference held in Bucharest, the capital of Romania by the United States National Security Council, the highest decision-making body of the United States on foreign policy in collaboration with the Central Intelligence Agency (CIA), the United States Agency for International Development (USAID), and the Departments of State, Defence and Agriculture was to depopulate Africa and Nigeria in particular.

Succinctly, the primary purpose of the U.S. government population control efforts as contained in the report of that conference is to maintain access to the mineral resources of the

Less Developed Countries or LDCs (Clowes 2021) and the outcome of the conference was contained in a document titled National Security Study Memorandum (NSSM-200) or The Kissinger Report, published on December 10, 1974. Clowes (2021) gave a detailed and comprehensive analysis of this report in his paper titled *Exposing the Global Population Agenda*. According to him, the report states that the U.S. economy will require large and increasing amounts of minerals from abroad, especially from less developed countries. That fact gives the U.S. enhanced interest in the political, economic, and social stability of the supplying countries. Wherever a lessening of population pressures through reduced birth rates can increase the prospects for such stability, population policy becomes relevant to resource supplies and to the economic interests of the United States.

In that report, 13 countries were specifically mentioned and Nigeria was the 4<sup>th</sup>. Montagna as cited by Clowes op. cit. said that when Nigeria refused to legalise contraception and homosexuality, the United States withdrew financial and military aid that would allow it to combat the Islamic terror group Boko Haram, which has murdered and kidnapped tens of thousands of that nation. Implicit in the extraction above is that they Western capitalists do not mean well for the developing world, Nigeria in particular and they will stop at nothing to ensure that Nigeria population is reduced.

### **Theoretical Framework**

Theoretical framework “is a scheme or device that links the problem under investigation with the assumptions, tenets, postulations and principles of an identified theory” (Agba 2014). In this study, social theory of pandemic as developed by the Scientific Advisory Group for Emergencies (SAGE) (2020), was adopted. This theory was carefully selected because there is nothing as practical as a good theory (Lewin 1951). Although there is nothing as dangerous as a theory that lags behind the times and yet remains the yardstick for making decision and passing judgment (Bourgon 2007).

The theory is developing in response to the coronavirus (COVID-19) crisis... The crisis initiated by the pandemic, cascading through society, from health to economy, to polity and into violence, includes a contestation between social democratic and neoliberal visions of alternative forms of society. The theory is concerned about the policies and forms of governance to address the varieties of COVID-19 crises at different moments and in different countries. The sickness and death rate resulting from COVID-19 pandemic varied between countries and between social groups and because there is no cure to COVID-19 yet. So, the key policies should concern itself with how to separate infected from not-infected people. What model of justice underlies the relationship between individual and society in the policies to stop the spread of infectious deadly virus (adapted from Walby 2021)?

### **Content Analysis**

The earlier claim that COVID-19 was intentionally manufactured in the lab against Africa could be substantiated by the fact that the long standing Western economic interest in the developing economies especially Africa can neither be denied, nor underestimated. Beginning from religious slavery, to human slavery, down to sociopolitical and economic colonisation;

then the present day neo colonialism and the globalisation syndrome. Western development has always been dependent on the underdevelopment of the developing economies as demonstrated by The Kissinger Report, which has remained the foundation of American population control policy to date. According Clowes (2021), the primary purpose of U.S. government population control efforts is to maintain access to the mineral resources of less-developed countries (LDCs), as contained in the Kissinger Report thus:

*The U.S. economy will require large and increasing amounts of minerals from abroad, especially from less developed countries. That fact gives the U.S. enhanced interest in the political, economic, and social stability of the supplying countries. Wherever a lessening of population pressures through reduced birth rates can increase the prospects for such stability, population policy becomes relevant to resource supplies and to the economic interests of the United States (p1).*

In that report, 13 countries were identified as their primary target. Those countries are: India, Bangladesh, Pakistan, Nigeria, Mexico, Indonesia, Brazil, the Philippines, Thailand, Egypt, Turkey, Ethiopia and Columbia. Notwithstanding the 13 countries mentioned in the report, the US is specifically funding the United Nations Population Fund (UNFPA) with the intent of supporting or participating in the management of a program of coercive abortion or involuntary sterilization in China (Clowes op. cit.). Through this agency, over \$100 million has been donated to China's population control programme in addition to the funding of a \$12 million computer complex specifically to monitor the population program; providing technical expertise and personnel that trained thousands of Chinese population control officials. They presented China with a United Nations award for the Most Outstanding Population Control Program (Clowes op. cit.).

Nigeria came 3<sup>rd</sup> in the list of countries where vigorous elimination of human lives agenda was targeted. As it appears, this policy did not work as planned in Nigeria and China, not minding the fact that it is a violation of human right to life. It is also against moral principles, which unfortunately, the imperialist ideology does not have any form of consideration for. The imperialist conspirators, with their undying quest to impoverish the citizens and control the resources in Africa, came up with the novel Corona Virus (COVID-19) with persistent objectives. This is rather unfortunate for Nigeria, because Nigeria is not among the African countries that are recording remarkable improvement in its Human Development Index. And the development of good quality human resources and utilization of their potential ensures the development of a nation. Therefore, the Human Development Index (HDI) emphasizes that people and their capabilities are the key criteria to assess the development of a country, not alone GNP/capita (Pahari 2022). Nigeria's HDI value for 2019 is 0.539— which put the country in the low human development category— positioning it at 161 out of 189 countries and territories (United Nations Development Programmes, 2020; Bailey 2020).

HDI is published annually by UNDP to measure long and healthy life, access to knowledge, and a decent standard of living of 191 countries in the world using different indicators. From the statistics of other indicators, Nigeria's life expectancy reached 52.7 years in 2021, the

expected years of schooling was 10.1, the mean years of schooling was 7.2 and the country's income per capita hit \$4,790 in 2021 (Bailey 2022). There is no doubt that COVID-19 restrictions contributed immensely to this low level of HDI in the recent time through stagnation of economic activities, inadequate access to quality healthcare services, and impromptu shutdown of schools and other institution of learning.

Seeing the unending quest for control and management of the resources in Nigerian, the resources for which the Western imperialists wanted to expose all Nigerians to a killer disease. This could be challenged anyway, but it is strongly argued that COVID-19 was deliberately allowed to filter into Nigeria through our numerous porous and unchecked international borders. Even, Hassan, Hashim, and Khan (2020) says Nigeria's first dozen cases of COVID-19 were all linked to travel history from endemic countries. Consequently, the President of the Federal Republic of Nigeria on March 30, 2020 signed into law, the COVID-19 Regulations 2020, which automatically confirms the presence of COVID-19 in Nigeria. Authoritatively therefore, we can be certain that there is COVID-19 in Nigeria as we have (number of recorded cases, confirmed deaths and the identifiable discharged persons). There are also few isolation centers scattered all over the country. Hassan, Hashim, and Khan op. cit. correspondingly said that as of June 30, 2020, Nigeria *has already* recorded 25,694 COVID-19 cases, 590 deaths and 9,746 recoveries. More recently, official statistics of the Nigerian Center for Disease Control (NCDC), as of December 25, 2022 states that Nigeria has 266, 381 confirmed cases of COVID-19; 3,155 confirmed deaths and 5, 708, 974 recoveries from COVID-19 (NCDC 2022).

Nonetheless, with reference to the vulnerability of the Nigerian workspace and the speed of transmissibility of COVID-19, the pandemic should have shown a seemingly common spread in Nigeria because nowhere is considered most effectively safe as a result of the observance of the COVID-19 protocols or vaccination. Immunisation which is a resultant health outcome of vaccination was declining in nearly every part of the country. The uptake of immunisation services was adversely affected beginning from the onset of the pandemic in Nigeria. A comparison of pentavalent performance between 2019 and 2020 shows a decrease in performance in the months since the COVID-19 outbreak began (GAVI Staff 2020).

Now therefore, because of the scanty recorded cases of COVID-19 and few confirmed deaths in many states in Nigeria without any justifiable cause, it is rational to argue that COVID-19 does not kill people as it is being vigorously advertised. In any case, COVID-19 is real and it is killing people; the records are there to show and get us convinced. But the African situation is different, even though one can justifiably say that the impact of COVID-19 in Africa is under reported but the fact remains that it did not impact on Africa the way it was intended. In Nigeria, just like in many other African countries, there was no strict compliance with the COVID-19 protocols, irrespective of the fact that the Federal Government and the Nigerian Centre for Disease Control (NCDC) in conjunction with Federal Ministry of Health and the Presidential Task Force (PTF) on COVID-19 lunched the "Take Responsibility Campaign" which rolled out some preventive and control measures. Ordinarily, enforcement of lockdown and other related measures meant to contain COVID-19 pandemic is handled by the police



(White and Fradella, 2020), but in the case of Nigeria and in the present circumstance, the police, army and other security agencies were co-opted to enforce the measures, which even resulted to some casualties and displacements.

The government according to GAVI Staff (2020) continued to work on mitigating the impact of COVID-19 on Routine Immunisation (RI) in the immediate and short term by planning for RI intensification through strategies such as an appointment-based approach, deploying geocoded mobile health vans and holding targeted, temporary fixed-post immunisation sessions. Yet, people's compliance rate was neither encouraging nor laudable. Even, in some parts of the country like in Imo state, there was low, if any, awareness of these Routine Immunisation intensification strategies.

As such, it is logical to say that it was not the safety measures rolled out by the take responsibility campaign that saved Nigerians because at the peak of the pandemic, Government declared a 'total' lockdown, which was expected to make movement of people, goods and services that requires human presence and movement from place to place, nearly impossible except those on essential duties. Yet, there was nowhere in the society that we recorded strict and undefiled observance of this COVID-19 protocols. The security agents that were engaged to enforce adherence compromised their Rules of Engagement (RoE). They started collecting “cold drinks” as it is called in South Africa or “Rogger” in Nigeria (bribe) just to allow people have their way particularly commuters and traders. Commercial drivers were paying soldiers for them to be able to carry the normal number of passengers as against the recommendations of the take Responsibility Campaign.

Again, people will wear their face masks before entering the bank but as soon as they enter into the banking hall, they will remove it; even the bankers themselves were not strictly using face masks; so how can they strictly enforce it on their customers? In the rural markets, it will be far better to say that nobody was using face mask than to say anything else. Many Nigerian workers have their offices where there is no adequate provision for drinking water, therefore regular washing of hands with soap under running water was a big challenge. Unfortunately, too, many Nigerians according to Onwuzoo (2020), will not be able to adopt this simple, cost-effective, life-saving measure owing to lack of access to clean water. During the 2020 World Water Day on March 22, 2020 Onwuzoo recalled that an international non-profit organisation, WaterAid Nigeria, revealed that 55 million Nigerians lack access to safe pump water or covered Well close to their homes. Yet, having clean and safe water in an emergency situation like the outbreak of the COVID-19 pandemic to meet drinking, sanitation, and hygiene needs is essential for every person.

Other than the protocol of washing hands regularly with running water, there was no other protocol against touching and carrying of the currency note about. According to a new research by the Australian Centre for Disease Preparedness (ACDP), the novel coronavirus can remain infectious for four weeks on banknotes and polymer notes (Kelleher 2020). More so, only around 8% of Africans were fully vaccinated as of December 2021 compared to more than 60% in many high-income countries and relatedly, just 3% of the almost 8 billion doses

given globally have been administered in Africa (WHO Africa 2021).

These and many more informed the submission that, though success was recorded but not necessarily as a result of strict compliance to the COVID-19 protocols and vaccination. By divine intervention, Africa did not record high death rate compared to China, US and other Western countries where it claimed significant number of lives. We are more or less being protected by divine intervention in terms of weather condition. This is true because considering the fact that COVID-19 is more deadly in areas with temperature is as low as 28°C and our weather temperature is unusually as high as 36°C, thereby making it nearly always impossible for COVID-19 to survive, and spread. According to Ames (2020), the total amount of time that SARS-CoV-2 survives in the air could be longer. However, some factors, such as air temperature and humidity, may also play an important role. Osuagwu, Mogaji, Osuagwu, Nebo, Okoh, Agbo and Agbon (2020) in their study on the effects of weather on COVID-19 transmission and mortality in Lagos, Nigeria concluded that

*There is a weak negative relationship between temperature and the spread of this disease, as well as its related mortality. Higher temperatures might reduce the disease transmission. The weak relationship between atmospheric temperature and COVID-19 incidence and mortality suggests that the disease may exhibit little or no seasonality unlike SARS or influenza, at least in places with similar weather conditions as in this study (P.6).*

Our natural immune system is stronger than the COVID-19. Herd immunity, also known as 'population immunity', which is the indirect protection from an infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infection (WHO 2020e), may have played a role in enhancing the internal body defence system against this contentious contagious virus. But there is no known study conducted in academic manner in the recent time that gives credence to herd immunity as the key factor for Africans protection against COVID-19 infection.

Nevertheless, most of these diseases and viruses are man-made, irrespective of the fact that scholars and health authorities sometimes claim that they emanated from African wildlife. The trending accusation from WHO is that Africa is facing a growing risk of outbreaks caused by zoonotic pathogens, such as the monkey pox virus which originated in animals and then switched species and infected humans. According to them, between 2001 and 2022 there was a 63% increase in the number of zoonotic outbreaks in the region and there were 1843 substantiated public health events recorded in the WHO African Region. Thirty percent of these events were zoonotic disease outbreaks. While these numbers have increased over the past two decades, there was a particular spike in 2019 and 2020 when zoonotic pathogens represented around 50% of public health events (WHO 2022).

Creation predates scientific revolution and the consequent scientific knowledge, which seek to establish true and necessary causes of things (Peter 2009). So if actual these zoonosis and zoonotic pathogens were all originating from animals, there would be little or nobody left in the continent of Africa considering how we rear domestic and hunt wild animals for diverse

reasons. Granted, some of these viruses may have jumped from animals to humans but that does not rule out the fact that most of the viruses the world is suffering today are products of genetic engineering and subversion of health technology. The development of what eventually became known as biotechnology or recombinant DNA methods started in 1974 with the experiments conducted in June by Noreen Murray and Kenneth Murray. They were the first to give a report of a genetically modified virus that could replicate and infect. Two months after, precisely in August, 1974 Marjorie Thomas, John Cameron and Ronald W. Davis submitted another report of similar achievement for publication.

According to Tyshenko (2017), it will be careless to believe that new deadly bioweapons could not be engineered in the future by smaller terrorist groups or an individual with enough knowledge and funding. Genetically modified viruses are not just noxious but deadly, infectious and can cause a pandemic too. A recent admonition by Tyshenko (2017) has it that bioterrorism risk management calls for stricter regulations over biotechnology as a way to control subversion of technology that may be used to create a man-made pandemic. Implicit in this is that subversion of technology to create a man-made pandemic is a possibility; and we have reasons to believe that COVID-19's origin has a link to that.

The world was forewarned about the increasing awareness of bioterrorism threats and the next pandemic predicted by experts. As such, several researchers called for stricter controls over biotechnology experimentation that provide dual-use information and technologies, dissemination of bioinformatics data and regulation of researchers as a way to manage infectious disease risks (Webster 1997 and Steinbrunner 2004). Some of these viruses may have jumped from animals to humans but that should not be seen as a prerogative or an exclusive reserve of the African region. In other parts of the world like Brazil, Costa Rica, India and Thailand, there are people who are closer to their wildlife just like Africans or is it that animals in Africa are hauliers of zoonotic diseases? Africans' biological body composition particularly the T-Cell and B-Cell also played key roles as to why we were protected in the midst of a lethal pandemic. T cell is a type of white blood cell that is of key importance to the immune system and is at the core of adaptive immunity, the system that tailors the body's immune response to specific pathogens. The T cells are like soldiers who search out and destroy the targeted invaders (Stoppler 2021). On the other hand, B cells are at the centre of the adaptive humoral immune system and are responsible for mediating the production of antigen-specific immunoglobulin (Ig) directed against invasive pathogens (typically known as antibodies) (Roghianian and Newman n.d.). Antibodies, according to Dr. Biology (2011):

*Trap invading viruses or bacteria in large clumps. This makes it easy for macrophages to eat them. Antibody-coated viruses are called "neutralized" because they can't infect your cells. Even after you have fought off your infection, some antibodies stay in your blood. If that virus tries to infect you again, your immune system has a head start trapping it (p.1).*

From the foregoing therefore, there is no sufficient justification for forceful and compulsory vaccination of all Nigerians since there is no scientific evidence in support of the uncommon

spread and low death rate unlike what was predicted by key players in the global health system. There is no trace of previous vaccination of all citizens against this kind of virus, which may suggest a strong cause of immunity against COVID-19. Therefore, it is more pertinent to research on that 'natural' cause of strong body defence against COVID-19, promote and sustain it for the good of all Nigerian and other nationalities with similar body characteristics. More so, some countries of the world produced their own vaccine why can't Nigeria produce her own vaccine and the ancillary supplies.

The Oxford/AstraZeneca vaccine is WHO's recommended vaccine for low-income countries. It was imported on March 2, 2021 but it was not subjected to stringent laboratory test to ascertain the extent to which it can cause blood clot or other health syndromes to Nigerians. Why it must be so subjected is because even the Global Advisory Committee on Vaccine Safety, a group of experts that provides independent and authoritative guidance to the WHO on topic of safe vaccine use, reported an adverse event called Thrombosis with Thrombocytopenia Syndrome (TTS) involving unusual and severe blood clotting events associated with low platelet counts after vaccination with this vaccine. Similarly, Guillain-Barre Syndrome (GBS) was also reported, though causal relationship with the vaccine was neither confirmed nor ruled out. And this suggest why the Global Advisory Committee on Vaccine Safety recommended a more rigorous studies to fully assess the significance of these events (WHO 2021c).

It is also worthy of note however, that result of reanalysis of the trail data of the same Oxford-AstraZeneca vaccine that Nigeria imported showed that the vaccine is only 74.6% protective against symptomatic COVID-19 disease (Emary, et al 2021). As such it only provided minimal protection against mild or moderate COVID-19 disease caused by the South African Variant of Concern (VOC) (Madhi, et al 2021). According to Choi (2021), South Africa suspended the administration of the one million doses of AstraZeneca vaccines it purchased from the Serum Institute of India (SII). This was as a result of the fact that serum antibodies from vaccinated participants in a laboratory experiments were either less able or unable to neutralize the South African virus. Serum Institute of India (SII) is a private biotechnology and biopharmaceutical company founded in 1966 in Pune, Maharashtra India by Dr Cyrus S. Poonawalla. It is the world's largest vaccine manufacturer by number of doses produced and sold globally (Serum Institute of India 2023). Their product line include vaccines, biopharmaceuticals, genetic drugs and over-the-counter drugs (Rajagopal 2020).

Until the Oxford/AstraZeneca vaccine is subjected to stringent laboratory test, the vaccine remains presumably less efficacious coupled with the fact about eighteen (18) countries have stopped administering it since March, 2021 over the controversial issues of blood clot and consequential death after vaccination. Applicability of this situation in Nigeria need to be substantiated or debunked with empirical evidences and until then, vaccination should be made a matter of choice. Moreover, Nigeria government has relaxed all forms of COVID-19 restriction since Monday, December 12, 2022.

## **Conclusion**

COVID-19 is real and it has come to stay. It is killing people in Nigerian and Africa but not as predicted by the key players in the global health system. The uncommon spread and low death rate in Nigeria and Africa at large is as a result of our natural body defense and ecological factors and not as a result of the efforts of the Medics, vaccination or strict observance of the COVID-19 protocols. In fact, Nigerian health sector was underprepared in terms of manpower, technology and equipment to handle health emergency of this nature. This unpreparedness is basically a product of underfunding and government negligence.

## **Recommendations**

While we advocate for compliance with International Health Regulations (IHR), we also recommend based on the fact that COVID-19 did not kill people as predicted by WHO, International Centre for Disease Control (ICDC), Bill and Melinda Gate Foundation and other key players in the global health system. Therefore, Nigerian Government, through the organizational structure of the Federal Ministry of Health, Nigerian Centre for Disease Control and National Primary Health Care Development Agency (NPHCDA) should;

1. Engage indigenous medics, virologists, scientists and technologists on an extensive scientific research into the singular cause of the uncommon spread, and survival in the midst of the contagious lethal pandemic.
2. To get this done, more effort should be channeled to the health sector in terms of funding and technological equipment supply so that researches for local production of harmless vaccines that can be amenable to our body system and ecological characteristics can kick off; rather than importing with huge amount of money from foreign countries.
3. Again, while we research to produce vaccines locally, administration of the Oxford/AstraZeneca vaccine should be stopped with minor conditions or better still, made a matter of choice. This is because, to me, everything said about this vaccine are still like a bottle filled with pale opaque liquid coupled with evidence of uncommon spread, uneven death rate and reports of blood clot. Therefore, until it is scientifically proved effective and harmless to Nigerians, the vaccine should either be stopped or be made a matter of choice.
4. It is further recommended that this mRNA called Oxford Astra/Zeneca vaccine should be subjected to strict laboratory check with close attention to every detail to ensure it is free from all forms of allergy, neuro-cognitive issues, inflammation and that it does not reduce life expectancy or make men less sexually active afterwards.
5. On the Monday, December 12, 2022 the Federal Government of Nigeria announced the relaxation of all COVID-19 restrictions including the Polymerase Chain Reaction (PCR) test, use of face mask, and gathering restrictions. This decision was in line with the recommendations of the Presidential Steering Committee (PSC) based on clinical and laboratory evidence of sustained reduction in COVID-19 infection and



transmission across the country. Leaning on the above Federal Government announcement, it is further recommended that the ongoing vigorous campaign for vaccination and the booster doses should be suspended forthwith.

## References

- Agba, M. S. (2014). *Fundamentals of research methodology in social sciences and humanities*, Calabar: University of Calabar Press
- Ames, H. (2020). *How long does Coronavirus last in the body, air and food? medical news today*, Retrieved on 15/04/21 from: <https://www.medicalnewstoday.com/articles/how-long-does-coronavirus-last>
- Bailey, B. (2022). *Nigeria's ranking in UN human development unchanged in 2021*, Retrieved <https://businessday.ng/news/article/nigerias-ranking-in-un-human-development-unchanged-in-2021/> 26/12/22
- Bailey, B. (2020). *Nigeria drops 3 places to 161 in UN's 2020 human development index, Business Day*. Retrieved <https://businessday.ng/news/article/nigeria-drops-3-places-to-161-in-uns-2020-human-development-index/> 26/12/22
- Bardsley, D. (2020). *What we know about the COVID-19 lifespan*, Retrieved on 15/04/21 from: <https://www.thenationalnews.com/uae/science/what-we-know-now-about-the-covid-19-lifespan-1.1092624>
- Bhargava, H. D. (2020). *What are the criteria for pandemic? WebMD*, Retrieved on 05/04/21 from: <https://www.webmd.com/lung/qa/what-are-the-criteria-for-a-pandemic>
- Bourgon, J. (2007). Responsive, responsible and respected government, *International Review of Administrative Science*. 73 (1). 15
- Brumfiel, G. (2020). *Harvard professor's arrest raises questions about scientific openness*, npr. Retrieved on 24/02/21 from: <https://www.npr.org/2020/02/14/806128410/harvard-professors-arrest-raises-questions-about-scientific-openness>
- Burns, N. & Grove, S. K. (1993). *The practice of nursing research: Conduct, critique and utilization (2<sup>nd</sup> ed)*, Philadelphia: Saunders
- Choi, E. M. (2021). COVID-19 vaccines for low- and middle-income countries. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 115 (5). 447- 456
- Chrsicaden, K. (2020). *Impact of COVID-19 on people's livelihoods, their health and our food systems. World Health Organisation (WHO)*, Retrieved on 06/04/21 from: <https://www.who.int/news/item/13-10-2020-impact-of-covid-19-on-people's-livelihoods-their-health-and-our-food-systems>

- Clowes, B. (2021). Exposing the global population control agenda, *Human Life International*. Retrieved on 27/12/22 from: <https://www.hli.org/resources/exposing-the-global-population-control/>
- CSIRO Australia (2020). *How long the COVID-19 virus lasts on surfaces: New research on SARS-CoV-2 “survivability Scitechdaily*, Retrieved on 15/04/21 from: <https://scitechdaily.com/how-long-the-covid-19-virus-lasts-on-surfaces-new-research-on-sars-cov-2-survivability/>
- Dr. B. (2011). *Viral attack. Arizona: Arizona State University School of Life Sciences: As a biologist*, Retrieved on 25/04/21 from: <https://askabiologist.asu.edu/viral-attack>
- Duncan, L. A., Schaller, M., & Park, J. H. (2009). Perceived vulnerability to disease: Development and validation of a 15-item self-report instrument, *Personal. Individual. Difference*. 47 (6).541–546
- Emery, K. R. W. et al (2021). Efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine against SARS-CoV-2 VOC 202012/01 (B.1.1.7). *The Lancet*. Retrieved [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3779160](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3779160) 30/12/22
- Falsenthal, M. & Young, D. (2020). *COVID-19 to plunge global economy into worst recession since world war II. The world bank*, Retrieved on 15/04/21 from: <https://www.worldbank.org/en/news/press-release/2020/06/08/covid-19-to-plunge-global-economy-into-worst-recession-since-world-war-ii>
- GAVI Staff (2020). *How is Nigeria addressing the public health challenge due to COVID-19? vaccines work*, Retrieved <https://www.gavi.org/vaccineswork/how-nigeria-addressing-public-health-challenges-covid-19?>
- Hassan, Z., hashim, M. J. & Khan, G. (2020). Population risk factor for COVID-19 deaths in Nigeria at subnational level, *The Pan African Medical Journal*. 35 (2). 131
- Jay, J. V. B, Katherine, B. & Robb, W. (2020). Using social and behavioural science to support COVID-19 pandemic response, *Nature of Human Behavioural*. 4. 460 – 471
- Kelleher, S. R. (2020). *Coronavirus can remain on paper currency for 28 days, Per new study*. Retrieved on 18/04/21 from: <https://www.forbes.com/sites/suzannerowankelleher/2020/10/11/coronavirus-can-remain-on-paper-currency-for-28-days-per-study/?sh=10e294d52fc5>
- Ksiazek, T. G., Erdman, D., Goldsmith, C. S., Zaki, S. R., Peret, T., Emery, S., et al. (2003). A Novel Coronavirus associated with severe acute respiratory syndrome, *The New England Journal of Medicine*. 348 (20), 1953 – 1966.

- LePan, N. (2020). *Visualising the history of pandemics: Multisystem inflammatory syndrome in children (MIS-C)*, Retrieved on 15/04/21 from: <https://www.visualcapitalist.com/history-of-pandemics-deadliest>
- Lewin, K. (1951). *Field theory in social science*, New York: Harper & Row
- Madhi, S. A. B. et al (2021). *Safety and efficacy of the ChAdOx1 nCoV-19 (AZD1222) Covid-19 vaccine against the B.1.351 variant in South Africa*. medRxiv, Retrieved <https://www.medrxiv.org/content/10.1101/2021.02.10.21251247v130/12/22>
- Martinez-Conde, S. (2019). *I heard it before, so it must be true*, *scientific American*, Retrieved on 24/04/21 from: <https://blogs.scientificamerican.com/illusion-chasers/i-heard-it-before-so-it-must-be-true/>
- Munroe, M. (2005). *The spirit of leadership: Cultivating the attitude that influence human action*, New Kensington. Whitaker House
- Murray, N. & Murray, K. (1974). Manipulation of restriction targets in phage  $\lambda$  to form receptor chromosomes for DNA fragments, *Nature* 251, 476 - 481
- National Centre for Immunisation and Respiratory Diseases (2012). *Vaccines: The basics centre for disease prevention and control*, Retrieved on the 12/04/21 from: <https://www.cdc.gov/vaccines/vpd/vpd-vac-basics.html>
- Nick (2021). *What's the difference between infectious and contagious? teens health*, Retrieved on 08/04/21 from: <https://kidshealth.org/en/teens/contagious.html#>:
- Nigerian Centre for Disease Control (NCDC) (2022). *COVID-19 Nigeria*, Retrieved on 18/04/21 from: <https://covid19.ncdc.gov.ng/>
- O'Neill, A. (2022). *Nigeria: Unemployment rate from 2002 2022*. Statista, Retrieved <https://www.statista.com/statistics/382366/unemployment-rate-in-nigeria/>
- Onwuzoo, A. (2020). COVID-19: Why regular hand washing is a challenge in Nigeria, *Punch Healthwise*, Retrieved <https://healthwise.punchng.com/covid-19-why-regular-hand-washing-is-a-challenge-in-nigeria/>
- Osuagwu, C., Mogaji, H., Osuagwu, E., Nebo, U., Okoh, H., Agbo, S., & Agbon, A. (2020). *Effect of weather on COVID-19 transmission and mortality in Lagos, Nigeria*. Scientifica 2020. Article ID 2562641. Retrieved on 19/04/21 from: <https://www.hindawi.com/journals/scientifica/2020/2562641/>
- Pahari, S. (2022). *Dimensions of HDI on human development: the Nigerian context*. Sky Line University Nigeria, Retrieved <https://www.sun.edu.ng/knowledge-update/dimensions-of-hdi-on-human-development-the-nigerian-context>

- Paintsil, E. (2020). COVID-19 threatens health systems in sub-Saharan Africa: The eye of the crocodile, *Journal of Clinical Investigation* 130 (6), 2741 – 2744
- Peter, C. (2009). *Revolutionising the sciences*. Princeton University Press, 65-67
- Rajagopal, D. (2020). AstraZeneca and serum institute of India sign licensing deal for 1 billion doses of Oxford vaccine, *The Economic Times*. Retrieved <https://economictimes.indiatimes.com/industry/healthcare/19/01/23>
- Rogers, K. (2021a). *Who can declare a pandemic and what criteria are required for an outbreak to be called a pandemic?* Britannica, Retrieved on 06/04/21 from: <https://www.britannica.com/story/who-can-declare-a-pandemic-and-what-criteria-are-required-for-an-outbreak-to-be-called-a-pandemic>
- Rogers, K. (2021b). *Pandemic disease outbreak*. Britannica. Retrieved on 06/04/21 from: <https://www.britannica.com/science/pandemic>
- Roghianian, A. & Newman, R. (n.d.). *B-Cells*, Retrieved on 25/04/21 from: <file:///C:/Users/USER/Downloads/B-cells.pdf>
- Sapru, R. K. (2013). *Administrative theories and management thought (3<sup>rd</sup> ed)*, Delhi: Asoke K. Ghosh, PHI Learning Private Ltd
- Scientific Advisory Group for Emergencies (SAGE) (2020). *Coronavirus (COVID-19) response*. Retrieved on 16/04/21 from: <https://www.gov.uk/government/groups/scientific-advisory-group-for-emergencies-sage-coronavirus-covid-19-response>
- Selassie, A. A. & Hakobyan, S. (2021). *Six charts show the challenges faced by Sub-Saharan Africa*. *International Monetary Fund, African Department*, Retrieved on 19/04/21 from: [https://www.imf.org/en/News/Articles/2021/04/12/na041521-six-charts-show-the-challenges-faced-by-sub-saharan-africa?utm\\_medium=email&utm\\_source=govdelivery](https://www.imf.org/en/News/Articles/2021/04/12/na041521-six-charts-show-the-challenges-faced-by-sub-saharan-africa?utm_medium=email&utm_source=govdelivery)
- Serum Institute of India (2023). *About Us*. *Serum Institute of India PVT Ltd*, Retrieved [https://www.seruminstitute.com/about\\_us.php](https://www.seruminstitute.com/about_us.php) 19/01/23
- Siegel, L. B. & Feijoo, L. G. (2019). *Ten years after: Reflection on the global financial crisis*. Research foundation briefs. CFA institute, Retrieved [https://www.cfainstitute.org/en/research/foundation/2019/ten-years-after?s\\_cid=ppc\\_RF\\_Google\\_Search\\_TenYearsAfter](https://www.cfainstitute.org/en/research/foundation/2019/ten-years-after?s_cid=ppc_RF_Google_Search_TenYearsAfter) 15/12/22
- Steinbruner, J. & Okutani, S. (2004). *The protective oversight of biotechnology*, *Biosecure Bioterror*. 2 (4). 273 - 280

- Streubert, H., & Carpenter, D. (1999). *Qualitative research in nursing: Advancing the humanistic perspective (2nd ed.)*, Philadelphia, PA: Lippincott Williams & Wilkins.
- Stoppler, M. C. (2021). Medical definition of T cell. *Medicine Net*, Retrieved on 25/04/21 from: [https://www.medicinenet.com/t\\_cell/definition.htm](https://www.medicinenet.com/t_cell/definition.htm)
- Thomas, M., Cameron, J. & Davis, R. W. (1974). Viable molecular hybrids of bacteriophage lambda and eukaryotic DNA. *Proceedings of the National Academy of Sciences of the United States of America*. 71 (11), 4579–4583
- Tripathi, L. P., Chen, Yi-An., Mizuguchi, K., & Morita, E. (2019). Network-based analysis of host-pathogen interactions. *Encyclopaedia of Bioinformatics and Computational Biology*. 3. 932-937
- Tyshenko, M. G. (2017). Management of natural and bioterrorism induced pandemic, *Bioethics*. 21 (7), 364–569
- Ukwuije, C. B. (2017). Nigeria's integration in the globalising world: Challenges to national development, *Journal of Law, Policy and Globalisation*. 62, 53 - 62
- United Nations Development Programmes (2020). *The next frontier: Human development and the anthropocene. Briefing note for countries on the 2020 Human Development Report – Nigeria*, Retrieved on 15/04/21 from: <http://hdr.undp.org/sites/default/files/Country-Profiles/NGA.pdf>
- UN News (2021). *COVID crises to push global unemployment over 200 million mark in 2022*, Retrieved <https://news.un.org/en/story/2021/06/1093182> 15/12/22
- Walby, S. (2021). The COVID pandemic and social theory: Social democracy and public health in the crises, *European Journal of Social Theory*, 24 (1). 22 - 43
- Webster, R. G. (1997). Prediction for future influenza pandemics, *The Journal of Infectious Diseases*. 176 (Sup 1). 14–19
- White, M. D., & Fradella, H. F. (2020). Policing a pandemic: Stay-at-home orders and what they mean for the police, *American Journal of Criminal Justice*. 45, 702–717
- World Health Organisation (WHO) Africa (2021). *Key lessons from Africa's COVID-19 rollout*, Retrieved <https://www.afro.who.int/news/key-lessons-africas-covid-19-vaccine-rollout> 29/12/22
- World Health Organisation (WHO) (2022). *In Africa, 63% jump in diseases spread from animal to people seen in the last decade*, Retrieved <https://www.afro.who.int/news/africa-63-jump-diseases-spread-animals-people-seen-last-decade> 20/12/22



- World Health Organisation (WHO) & International Labour Organisation (ILO) (2021). *COVID-19: Occupational health and safety for health workers. Interim guidance*, Retrieved on 07/04/21 from: [file:///C:/Users/USER/Downloads/WHO-2019-nCoV-HCW\\_advice-2021.1-eng.pdf](file:///C:/Users/USER/Downloads/WHO-2019-nCoV-HCW_advice-2021.1-eng.pdf)
- World Health Organisation (WHO) (2021a). *Vaccines and immunisation*, Retrieved on 12/04/21 from: [https://www.who.int/health-topics/vaccines-and-immunization#tab=tab\\_1](https://www.who.int/health-topics/vaccines-and-immunization#tab=tab_1)
- World Health Organisation (WHO) (2021b). Statement on the seventh meeting of the International Health Regulations (2005). *Emergency committee regarding the coronavirus disease (COVID-19) pandemic*, Retrieved on 19/04/21 from: [https://www.who.int/news/item/19-04-2021-statement-on-the-seventh-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-coronavirus-disease-\(covid-19\)-pandemic](https://www.who.int/news/item/19-04-2021-statement-on-the-seventh-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-coronavirus-disease-(covid-19)-pandemic)
- World Health Organisation (WHO) (2021c). *The Oxford AstraZeneca (ChAdx1-S [recombinant] vaccine) COVID-19 vaccine: What you need to know*, Retrieved <https://www.who.int/news-room/feature-stories/detail/the-oxford-astrazeneca-covid-19-vaccine-what-you-need-to-know?29/12/22>
- World Health Organization (WHO). (2020a). *Mask use in the context of COVID-19: interim guidance*, Retrieved on 07/04/21 from: <https://apps.who.int/iris/handle/10665/337199>
- World Health Organisation (WHO) (2020b). *Naming the coronavirus disease (COVID-19) and the virus that causes it*, Retrieved on 22/11/20 from: [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
- World Health Organisation (WHO) (2020d). *Vaccines and immunisation: What is vaccination?* Retrieved on 12/p4/21 from: <https://www.who.int/news-room/q-a-detail/vaccines-and-immunization-what-is-vaccination>
- World Health Organisation (WHO) (2020e). *Coronavirus disease (COVID-19): Herd immunity, lockdown and COVID-19*, Retrieved <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/>
- World Meter (2022). *Coronavirus death toll*, Retrieved <https://www.worldometers.info/coronavirus/coronavirus-death-toll/> 15/12/22
- Zaki, A. M., Van-Boheemen, S., Bestebroer, T. M., Osterhaus, A. D. M. E., Fouchier, R. A. M. (2012). Isolation of a novel coronavirus from a man with pneumonia in Saudi Arabia. *The New England Journal of Medicine*. 367(19). 1814–1820