

# COVID-19 PANDEMIC: SAVE HUMANITY THROUGH GOOD LEADERSHIP AND SOLIDARITY TO DEFEAT THE CORONAVIRUS

<sup>1</sup>Ehis BS. <sup>2</sup>Omoti AE

---

<sup>1</sup>Lecturer, Department of Community Medicine, Igbinedion University Okada, Edo State. <sup>2</sup>Professor, Department of Ophthalmology, School of Medicine, University of Benin, Benin City, Edo State, Nigeria.

---

### ABSTRACT

**Aim:** To assess the Public health crisis and Potential social and economic crises caused by the Coronavirus disease (COVID-19) in Nigeria.

**Methods:** The information used in this article were retrieved from online publications, newspapers and personal field experience as a member of Edo State case management pillar and infections, prevention and control pillar COVID-19. Also, as the director of infections, prevention and control, co-coordinator of preparedness and prompt response to COVID-19, Igbinedion University Teaching Hospital (IUTH), Okada, and a member of guideline monitoring of COVID-19, Igbinedion University Okada, (IUO), Edo State.

**Result:** Nigeria was found to be the third-highest Covid-19 cases in Africa, trailing South Africa and Egypt with over fourteen thousand people who have been infected by the novel coronavirus. Despite all these figures, many Nigerians appear not to believe that Covid-19 is real, while others gloat that Covid-19 is mainly targeting the country's elite, particularly politicians. But with borders closed and each country haunted by its own Covid-19 nightmare, Nigeria's big men and women were forced to use their country's hospitals, prompting a stream of taunts and jokes. The infections and deaths by COVID-19 in Nigeria and elsewhere in Africa generally indicate a low level contrary to the WHO projection. The fatality rate in Nigeria is between 2.9% to 3.6% after three months of the pandemic. After 100 days of the index case of Covid-19, the virus has spread to 35 states and the Federal Capital Territory (FCT). The caseload however keeps increasing, especially in Lagos, Abuja, Kano, Ogun and Edo State. Seventy nine thousand nine hundred forty eight people has been tested, and four thousand two hundred and six people had been successfully treated and discharged as at 9<sup>th</sup> June, 2020. The cases with travel history went from 100% to a current 2%. Twenty three percent of cases were contacts of confirmed cases while source of infection of 75% was a reflection of ongoing community transmission in Nigeria. A small proportion of the population attests to have received any support from the government. However, some private sectors, religious leaders, churches, mosques and non-governmental organisations provided a lot of support to communities across the country.

**Conclusion:** Timely and evidence-based information is the best vaccine against rumors and misinformation. Information, communication and education are the most important resource to enable a population to make informed decisions on how to take care of their health, and to prevent rumors and misinformation. The Nigerian government must aim to protect its citizens and provide them with the necessary commodities or funds to help mitigate the consequences of this pandemic.

**Keywords:** Coronavirus, Pandemic, Global Public health crisis, Potential social and economic crises, Nigeria, Africa.

**All correspondence to:** DR BODENO SUNDAY EHIS, Department of Community Medicine, Igbinedion University Okada, Edo State. E-mail; bodenoehis@gmail.com and Tel; +2348065472148.

### INTRODUCTION

Nigeria is one of the most populous black nations worldwide with a population of over 200 million people.<sup>1,2</sup> As with the rest of the world, Nigeria is

currently dealing with the coronavirus disease 2019 (COVID-19) pandemic,<sup>3-7</sup> but in a somewhat different fashion.

Nigeria has the third-highest Covid-19 cases in Africa, trailing South Africa and Egypt with over fourteen thousand people who have been infected by the novel coronavirus.<sup>4,5,7</sup> Despite all these figures, many Nigerians appear not to believe that Covid-19 is real, while others gloat that Covid-19 is mainly targeting the country's elite, particularly politicians, despite warnings that the life-threatening respiratory illness could hit the poor as well.<sup>7-10</sup> These are the kind of people who normally jet out of the country at the slightest headache because the country's hospitals are poorly funded, run-down, and lack adequate equipment. Contrary to the erroneous belief, this virus is real and not for the rich or elite alone.<sup>5-7,9,10</sup> Everyone is at risk.

The Nigeria's health system before the pandemic was nearly non-existent.<sup>11-13</sup> In most of the Cities and States, the health systems were completely dilapidated as they have not received adequate attention, and some government officials have contributed to health system collapse by encouraging medical tourism.<sup>11,13</sup> Nigerians spent more than 1bn naira (\$800m) on medical tourism just in 2013.<sup>11</sup> But with borders closed and each country haunted by its own Covid-19 nightmare, Nigeria's big men and women are forced to use their country's hospitals, prompting a stream of taunts and jokes.<sup>11,12</sup> "This is your punishment for not investing in your country's health system," some say. "I thought our hospitals were not good enough for you," others say. Some Nigerians also hoped that the "selectiveness" of the virus might be God's way of bringing about changes in the government. The less malicious folk shrouded their great hope in a prayer: "Let God's will be done."

The coronavirus COVID-19 pandemic is the defining global health crisis of our time and the greatest challenge world is facing since World War two.<sup>14-16</sup> Since its emergence, the virus has spread to every continent except Antarctica.<sup>14</sup> Cases are rising daily in Africa the Americas, and Europe.<sup>14,16</sup> Countries are racing to slow the spread of the virus by testing and treating patients, carrying out contact tracing, limiting travel, quarantining citizens, and cancelling large gatherings such as sporting events,

concerts, and schools.<sup>11,12,17</sup> The pandemic is moving like a wave that may yet crash on those least able to cope.<sup>18,19</sup> But COVID-19 is much more than a health crisis. By stressing every one of the countries it touches, it has the potential to create devastating social, economic and political crises that will leave deep scars.<sup>18-20</sup>

The The Global per capita income is expected to fall four percent.<sup>14</sup> The World Bank has warned that the virus could push between 40 and 60 million of the world population into extreme poverty by the end of 2020, with sub-Saharan Africa and South Asia hardest hit.<sup>14,18</sup> The International Labour Organization (ILO) estimates that half of work force could lose their jobs within the next few months, and the virus could cost the global economy over US\$10 trillion if the pandemic persisted to end of 2020.<sup>14,18</sup> The World Food Programme says 265 million people globally may face crisis levels of hunger unless direct action is taken through good policies and solidarity.<sup>14,18</sup> According to United Nations Development Programme (UNDP), with schools closed, estimates that effective out of school rates could regress to levels not seen since the 1980s, the largest reversal ever taking back to a time before the Sustainable Development Goals (SDGs) or even the Millennium Development Goals (MDGs), and threatening the hard work and progress of the past 30 years.<sup>14,18</sup>

coronavirus was first reported on the 31st of December, 2019 from Wuhan, China as cluster of pneumonia cases of unknown cause that was later identified and named as Severe Acute Respiratory Syndrome coronavirus 2 (SARS-cov-2) responsible for coronavirus disease 2019 (COVID-19).<sup>16-19</sup> Since then the infection has spread rapidly across the globe and declared pandemic on 11<sup>th</sup> March, 2020 by the World Health Organization (WHO).<sup>21-27</sup> Currently, over seven million people have been infected with the disease with about a half million deaths as at June, 11<sup>th</sup> 2020 and case fatality rate (CFR) of 17.0% in two hundred and thirteen countries of the world.<sup>28-30</sup>

The first confirmed (index) case in Nigeria was on 27 February 2020,<sup>31,32</sup> when an Italian citizen in Lagos tested positive to the virus. Since then, the situation has developed with more cases occurring, regardless of measures initiated by the

state and federal government to combat the virus and return to normalcy.<sup>4,11,12</sup>

After 100 days of the index case of Covid-19 was confirmed in Lagos, the virus has spread to 35 states and the Federal Capital Territory (FCT). The caseload however keeps increasing, especially in Lagos, Abuja, Kano, Ogun and Edo State.<sup>33</sup>

The Nigerian Centre for Disease Control (NCDC) made a startling remark about the increasing coronavirus caseload with case fatality of about four hundred in the country. So far, seventy nine thousand nine hundred forty eight people has been tested, and four thousand two hundred and six people had been successfully treated and discharged as at 9<sup>th</sup> June, 2020. According to NCDC, at the onset of COVID19 in Nigeria, cases with travel history went from 100% to a current 2%. Twenty three percent of cases were contacts of confirmed cases while source of infection of 75% was a reflection of ongoing community transmission in Nigeria.<sup>4,11-13,29</sup>

The WHO has stated that there is no specific treatment and thus supportive care is the main focus of management based on the symptoms and severity at presentation and supportive care for infected persons has been found to be highly effective. It advised on several methods to help prevent spread of the virus and to save health systems across the world from a complete collapse such as health washing, social/physical distancing, use of face mask and staying at home.<sup>3,14,15</sup>

As part of Public Health prevention activities, the Federal Government of Nigeria postponed the National Sports Festival (Edo 2020), shut down NYSC orientation camps and ordered the immediate shutdown of all schools in the country. All non-essential public servants on Grade level 12 and below are to stay and work from home with effect from 24<sup>th</sup> march, until further notice. Officers who have recently visited countries with a high incidence of COVID 19 or have had contact with persons who recently returned from any of these countries are advised to self-isolate at home for two weeks. The president also gave a national broadcast and ordered a total lockdown of three States: Lagos, Ogun and Abuja which has since be reviewed several occasions.<sup>4,5,11-13,29</sup> Some State Governors have also taken some steps to limit the spread of COVID-19 by introducing interstate shutdown of borders.<sup>4,5,11-13,29</sup>

Shortly after the order was announced by the Federal Government, there was uproar among the citizens due to a myriad of concerns. Nigeria, in 2018, was announced by the World Poverty Clock to be the poverty capital of the world, with over 40% of its citizens living below the poverty line.<sup>34</sup> Therefore, a large proportion of the population lives on daily income with no savings to act as a financial buffer during the lockdown. The prospect of staying at home could, therefore, lead to another problem of hunger, social devices and even death.<sup>11-13</sup>

The Federal Government promised the citizens some palliative measures, which include disbursing of funds and food items to those most affected.<sup>35</sup> But the reality on the ground is a far cry from the promises made; only a small proportion of the population attest to receiving any support.<sup>11-13,36</sup> A large number of citizens have disobeyed the lockdown order in the hope of making sales or trying to earn living through other services, but they were apprehended by the law enforcement agents. The combined effort of the police and the military to enforce the lockdown has caused more deaths than the infection itself.<sup>11-13,20,35,36</sup> One has to question whether these aforementioned negative effects override the reasons for the lockdown in the first place, to flatten the curve of the infection. According to news from other countries in Africa, the situation in the country is almost a perfect mirror of the situation across the whole continent of Africa.<sup>16,17,19</sup>

There are some positives to consider; some private sectors, religious leaders, churches, mosques and non-governmental organisations have provided a lot of support to communities across the country. They have facilitated countless distributions of food items to the less privilege in the society. Also, there is hope that the health sector will finally receive the attention it needs from the government in response to the lessons learned from this pandemic.<sup>11-13,20</sup>

Irrespective of these positive aspects of COVID-19 and of lockdown, fears remain that the number of deaths as a result of lockdown measures will be greater than those due to infection. The Nigerian government must aim to protect its citizens and provide them with the necessary commodities or funds to help mitigate the consequences of this pandemic.

Social-distancing and self-isolation in a typical Nigerian slum is impossible. About thirty families often cram into a building, sharing the same bathroom and toilet.<sup>17,20,29,33</sup> The potential disaster is unimaginable. So while the lockdown causes much inconvenience and hardship for all Nigerians, especially the poor and slum dwellers, it helps to maintain the vast gulf that exists in society, thus preventing those at the top from transmitting the virus to those at the bottom.

The UN Secretary-General, António Guterres urge all governments to put women's safety first as they respond to the pandemic.<sup>37</sup> Women are particularly exposed during health crises. They make up the bulk of the first healthcare responders. If they are working from home, they will likely shoulder an even greater burden of housework and childcare, and they are, in too many cases, in greater danger with their partners. Mounting evidence suggests domestic violence is surging worldwide as a result of the COVID-19 lockdowns.<sup>11,13,20,29</sup>

There are so many unknowns for Africa on how COVID-19 will interact with the young population.<sup>3,5</sup> The infections and deaths by COVID-19 in Nigeria and elsewhere in Africa generally indicate a low level contrary to the WHO projection<sup>3,38-43</sup> The testing levels in Africa are far below those in Europe and America which may be responsible for the low incidences.<sup>44</sup> Nigeria has conducted fewer than 12,000 tests of its large population as of April 26<sup>th</sup>, 2020. However,<sup>44</sup> the fatality rate in Nigeria is between 2.9% to 3.6% after three months of the pandemic.<sup>4,28,29</sup> The following may be responsible for the low incidence and fatality in Africa; a young population based on lower average life expectancy (fifty six years in West Africa in 2019).<sup>45</sup> The ages below these averages of life expectancy have relatively good immunity and low numbers of co-morbidities. Vitamin D3 is an immune booster which protect against coronavirus disease is an abundance of sun light in the Africa continent.<sup>46</sup> The frequency of exposure to infections is very high in Africa because of the poor hygiene conditions. This may lead to generation of specific antibodies (IgG) in Africans to different diseases including coronaviruses which may make African immune system much stronger than that of Caucasians and Asians.<sup>15,16</sup>

Conclusion/recommendations

The coronavirus disease continues to spread across the world following a trajectory that is difficult to predict.<sup>3,14,17,19</sup> The standards dealing with safety and health at work, humanitarian and socio-economic policies, working arrangements, protection of specific categories of workers and provides guidance on the design of rapid responses that can facilitate speed and a stronger recovery from the crisis.

Nigeria's healthcare sector must be supported through adequate funding, incentives for health workers and healthcare subsidies for the most vulnerable people.

Through targeted tax incentives, social transfers, and regulatory support, the Nigerian government could help minimize the impact of COVID-19 on the most vulnerable businesses and citizens. The adoption of social distancing measures and lockdowns in the most affected cities are crucial to limit the spread of the virus. In addition, the government should partner with informal groups such as trade associations, which have a wider reach, to deliver monetary support to people in vulnerable employment.

The federal government and the Central Bank of Nigeria should expand loans to states to enable them to pay workers and support the healthcare sector.

The government should reduce the cost of governance by reducing administrative costs and prioritizing the most effective development programs. This will free up more money for health and education spending, as well as infrastructural spending and the build-up of fiscal buffers to improve the country's resilience. Similarly, reducing the misuse of public finances through commitment to transparency, opening up budgets, and strengthening anti-corruption institutions should be a priority during and post COVID-19.

Now more than ever, policymakers must be responsive to lessen the effects of the impending social and economic crises and better prepare Nigeria for the future.

Timely and evidence-based information is said to be the best vaccine against rumors and misinformation.<sup>47</sup> Therefore, information, communication and education are the most

important resource to enable a population to make informed decisions on how to take care of their health, and to prevent rumors and misinformation. Informing populations about the health risks posed by COVID-19, as well as measures they can take to protect themselves, is key to mitigating spread and reducing the likelihood that people will become infected. The provision of accurate, timely and frequent information in a language that people understand, via reliable channels, enables populations to make decisions and adopt positive behaviors to protect themselves and their loved ones from diseases such as COVID-19. There should be a global human-centred response which is grounded in solidarity.<sup>48</sup>

## References

1. United Nations World Population Prospects (2019 Revision) - United Nations population estimates and projections. Available @ <https://www.worldometers.info/coronavirus/country/nigeria>, Retrieved on 12<sup>th</sup> June, 2020.
2. World Population Ageing : New York: United Nations, Department of Economic and Social Affairs, Population Division, 2020. Available @: <https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2019-Highlights.pdf>  
International Monetary Fund: Policy responses to COVID-19. Retrieved on 12<sup>th</sup> June, 2020.
3. World Health Organisation (WHO). Novel Coronavirus (2019-nCoV) Situation Report–11. 2020. Available @: <https://www.who.int/docs/default-source/coronaviruse>. Retrieved on 12<sup>th</sup> June, 2020.
4. Nigeria Centre for Disease Control (NCDC). Weekly Epidemiological Report on COVID 19 Pandemic. (2020). Available @ <https://ncdc.gov.ng/reports/weekly>. Retrieved on 12<sup>th</sup> June, 2020.
5. Prediction of the COVID-19 spread in African countries and implications for prevention and control: A case study in South Africa, Egypt, Algeria, Nigeria, Senegal and Kenya. *Science of The Total Environment J.* 2020. 729 (1) 10-47. Available @ <https://www.sciencedirect.com/science/article/pii/S0048969720324761>. Retrieved on 12<sup>th</sup> June, 2020.
6. COVID-19 pandemic: Emerging Microbes & Infections. An African perspective *J.* 2020; 9(1) 12-16
7. Africa Centre for Disease Control and Prevention: Africa CDC establishes continent-wide task force to respond to global coronavirus epidemic. 2020. Available @: <https://africacdc.org/news/africa-cdc-establishes-continent-wide-task-force-to-respond-to-global-coronavirus-epidemic/>. Retrieved on 12<sup>th</sup> June, 2020.
8. DW. Africa. World Bank: no African country can face this crisis alone. 2020. Available @: <https://www.dw.com/en/world-bank-no-african-country-can-face-this-crisis-alone/a-53142901>. Retrieved on 12<sup>th</sup> June, 2020.
9. Gilbert M, Pullano G, Pinotti F. Preparedness and vulnerability of African countries against importations of COVID-19: a modelling study. *Lancet J.* 2020; 395:871–877.
10. Mo Ibrahim Foundation. COVID-19 in Africa: A call for coordinated governance, improved health structures and better data. Africa. 2020. Available @: <https://mo.ibrahim.foundation/news/2020/c>

- ovid-19-africa-a-call-coordinated-governance-improved-health-structures-and-better-data. Retrieved on 12<sup>th</sup> June, 2020.
11. Tofe A. How Nigeria is faring nearly two weeks into COVID-19 lockdown. (2020). Available @ <https://www.theafricareport.com/25998>. Retrieved on 12<sup>th</sup> June, 2020.
  12. John C, Jack M. How Nigeria Has Responded to COVID-19 So Far. (2020). Available @ <https://www.cfr.org/blog/how-nigeria-has-responded-covid-19-so-fa>. Retrieved on 12<sup>th</sup> June, 2020.
  13. Chukwuka O, Mma AE. Understanding the impact of the COVID-19 outbreak on the Nigerian economy. (2020.) Available @ <https://www.brookings.edu/blog/africa-in-focus/2020/04/08/understanding-the-impact-of-the-covid-19-outbreak-on-the-nigerian-economy>. Retrieved on 12<sup>th</sup> June, 2020.
  14. World Health Organisation (WHO). Coronavirus Pandemic, 2020. Available @ <https://www.who.int/health-topics/coronavirus>. Retrieved on 12<sup>th</sup> June, 2020.
  15. World Health Organisation (WHO). Advice on the use of masks in the community, during home care and in health care settings in the context of the novel coronavirus 2019-nCoV outbreak (Interim guidance). 2020. Available @ [WHO/nCov/IPC\\_Masks/2020](https://www.who.int/publications/m/item/WHO-nCov-IPC-Masks/2020). Retrieved on 12<sup>th</sup> June, 2020.
  16. Africa Center for Strategic Studies: Mapping Risk Factors for the Spread of COVID-19 in Africa. Available @ <https://africacenter.org/spotlight/mapping-risk-factors-spread-covid-19-africa>. Retrieved on 12<sup>th</sup> June, 2020.
  17. COVID-19 WHO Africa Region: African countries move from COVID-19 readiness to response as many confirm cases. Available @ <https://www.afro.who.int/health-topics/coronavirus-covid-19>. Retrieved on 12<sup>th</sup> June, 2020.
  18. United Nations Development Programme: COVID-19 social and economic recovery plan. Available @ [https://www.undp.org/content/undp/en/home/newscentre/news/2020/UN\\_sets\\_out\\_COVID\\_social\\_and\\_economic\\_recovery\\_plan.html](https://www.undp.org/content/undp/en/home/newscentre/news/2020/UN_sets_out_COVID_social_and_economic_recovery_plan.html). Retrieved on 12<sup>th</sup> June, 2020.
  19. Africa in the news: Impacts of COVID-19 on African economies and elections updates. (2020). Available @ <https://www.brookings.edu/blog/africa-in-focus/2020/04/04/africa-in-the-news-impacts-of-covid-19-on-african-economies-and-elections-updates>. Retrieved on 12<sup>th</sup> June, 2020.
  20. Bernard K. COVID-19 in Nigeria: a disease of hunger. (2020). Available @ [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(20\)30220-4](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30220-4). Retrieved on 12<sup>th</sup> June, 2020.
  21. World Health Organisation (WHO). Novel Coronavirus—China. 2020. Available @ <https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/>. Retrieved on 12<sup>th</sup> June, 2020.
  22. WHO announces COVID-19 outbreak a pandemic. Europe: World Health Organization. 2020. Available @: <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/3/who->

- announces-covid-19-outbreak-a-pandemic. Retrieved on 12th June, 2020.
23. Lai CC, Shih TP, Ko WC. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. *Int J Antimicrob Agents.* 2020; 55 (1) 105-124. Available @ [10.1016/j.ijantimicag.2020.105924](https://doi.org/10.1016/j.ijantimicag.2020.105924). Retrieved on 12th June, 2020.
  24. Virological.org. Novel 2019 Coronavirus Genome 2020. Available @ <http://virological.org/t/novel-2019-coronavirus-genome/319>. Retrieved on 12<sup>th</sup> June, 2020.
  25. Su S, Wong G, Shi W. Epidemiology, genetic recombination and pathogenesis of coronaviruses. *Trends Microbiol J.* 2019; 6: 90–502. doi:10.1016/j.
  26. Qun L. Xuhua G, Peng W, Xiaoye. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia. *The New England Journal of Medicine.* 2020;382:1199-1207.
  27. Centre for Disease Control and Prevention (CDC). 2019 Novel coronavirus, Wuhan, China. 2020. Available @ <https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>. Retrieved on 12<sup>th</sup> June, 2020.
  28. Centre for Disease Control and Prevention (CDC). COVID-19 Death Data and Resources. Available @ <https://www.cdc.gov/nchs/nvss/covid-19.htm>. Retrieved on 12<sup>th</sup> June, 2020.
  29. Nigeria Centre for Disease Control Nigeria (NCDC). coronavirus: Cases hit 10,162; rundown of May 2020 top developments. Available @ <https://www.africanews.com/2020/06/01/nigeria-coronavirus-hub-updates-covid-19>. Retrieved on 12<sup>th</sup> June, 2020.
  30. Centre for Disease Control and Prevention (NCDC). COVID-19 Forecasts: Cumulative Deaths. (2020). Available @ <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html>. Retrieved on 12<sup>th</sup> June, 2020.
  31. Nigeria Centre for Disease Control (NCDC): COVID-19 Pandemic: First case of coronavirus disease confirmed in Nigeria, 28 February 2020. Retrieved on 12<sup>th</sup> June, 2020.
  32. Paul A. Nigeria responds to COVID-19; first case detected in sub-Saharan Africa. (2020). Available @ <https://www.nature.com/articles/d41591-020-00004-2>. Retrieved on 12<sup>th</sup> June, 2020.
  33. Nigeria Centre for Disease Control: 100 Days of Nigeria COVID-19 Response. (2020). Available @ <https://ncdc.gov.ng/news/237/update-on-covid-19-in-nigeria>. Retrieved on 12<sup>th</sup> June, 2020.
  34. The World Bank: Poverty and Equity Portal (2019). Available @ <http://povertydata.worldbank.org/poverty/country/NGA>. Retrieved on 12<sup>th</sup> June, 2020.
  35. Ayado S. Business Day: 2.6m poor Nigerians to benefit from FG's cash transfer intervention; identifies 11m vulnerable persons. (2020). Available @ <https://businessday.ng/coronavirus/article/covid-19-2-6m-poor-nigerians-to-benefit-from-fgs-cash-transfer-intervention/>. Retrieved on 12th June, 2020

36. Ogbonnaya OO. Independent Newspaper: Where Are The Palliative After Lockdown Over Coronavirus? (2020). Available @ <https://www.independent.ng/where-are-the-palliative-after-lockdown-over-coronavirus/>. Retrieved on 12th June, 2020.
37. United Nations Development Programme: COVID-19: Engaging women and youth in fighting. (2020). Available @ <https://www.unv.org/Success-stories/Engaging-women-and-youth-fighting-COVID-19>. Retrieved on 12<sup>th</sup> June, 2020.
38. Patrick D, Jim L, Shalini U, Wendy W. Fighting COVID-19 in Africa Will Be Different. 2020. Available @: <https://www.bcg.com/en-za/publications/2020/fighting-covid-in-africa.aspx>. Retrieved on 12th June, 2020
39. Ruth M. Africa braces for coronavirus, but slowly. The New York Times: March 17, 2020. Available @: <https://www.nytimes.com/2020/03/17/world/africa/coronavirus-africa-burkina-faso.html>. Retrieved on 12th June, 2020.
40. Zebin Z, Xin L, Feng L, Gaofeng Z, Chunfeng M Liangxu W. Science of The Total Environment Prediction of the COVID-19 spread in African countries and implications for prevention and control: A case study in South Africa, Egypt, Algeria, Nigeria, Senegal and Kenya. 2020; 729:13-18. Available @ <https://doi.org/10.1016/j.scitotenv.2020.138959>. Retrieved on 12th June, 2020.
41. John N, Wessam M. Looming threat of COVID-19 infection in Africa: act collectively, and fast. Lancet 2020; 395:841-842
42. Wu, K. Leung, G. Leung GM. Now casting and forecasting the potential domestic and international spread of the 2019-nCoV outbreak originating in Wuhan, China: a modeling study Lancet 2020; 395: 689-697.
43. Jessie Y. Steve G. Helen R and Laura S. Coronavirus pandemic: Updates from around the world. (2020). Available @ [https://edition.cnn.com/world/live-news/coronavirus-pandemic-06-12-20-intl/h\\_5bbc50850dd7c286645135b25d70401f](https://edition.cnn.com/world/live-news/coronavirus-pandemic-06-12-20-intl/h_5bbc50850dd7c286645135b25d70401f). Retrieved on 12<sup>th</sup> June, 2020.
44. Nigeria Centre for Disease Control: National Strategy to Scale Up Access to Coronavirus Disease Testing in Nigeria. (2020). Available @ [https://covid19.ncdc.gov.ng/media/files/COVID19TestingStrategy\\_2ZWBQwh.pdf](https://covid19.ncdc.gov.ng/media/files/COVID19TestingStrategy_2ZWBQwh.pdf). Retrieved on 12<sup>th</sup> June, 2020.
45. World Health Organisation. Knowledge translation on ageing and health: policy framework; 2019. Available @ : <http://www.who.int/ageing/en/2020>. Retrieved on 12th June, 2020.
46. Tabasi N, Rastin M, Mahmoudi M. Influence of vitamin D on cell cycle, apoptosis, and some apoptosis related molecules in systemic lupus erythematosus. Iran J Basic Med Sci. 2015; 18:1107-1111
47. Education and communication. (2020). Available @ <https://pandemic.internationalsos.com/2019-ncov/ncov-education-and-communication>. Retrieved on 12<sup>th</sup> June, 2020.
48. United Nations Development Programme: Humanity needs leadership and solidarity to defeat the coronavirus. (2020). Available @ [https://www.undp.org/content/undp/en/home/covid-19-pandemic-response.html?utm\\_source=web&utm\\_medium=sdgs&utm\\_campaign=coronavirus](https://www.undp.org/content/undp/en/home/covid-19-pandemic-response.html?utm_source=web&utm_medium=sdgs&utm_campaign=coronavirus). Retrieved on 12<sup>th</sup> June, 2020.