# Studying the trend and progress on Covid-19 pandemic from 29th January to 4th of February 2022 across different countries of the world

Joseph Oyepata Simeon[1]*, Joseph Opeyemi Tosin[2], Sabastine Aliyu Zubairu[3], Joseph Sunday Oyepata[4]

[1]*Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, Federal University, Oye–Ekiti, Ekiti State, Nigeria*

[2]*Department of Pharmacy, University College Hospital, Ibadan, Oyo State, Nigeria*

[3]*Department of Pharmacology and Therapeutics, Faculty of Pharmacy, Gombe State University, Gombe State, Nigeria.*

[4]*Mechanical Engineering Department, Faculty of Engineering, Ambrose Alli University, Ekpoma, Edo State, Nigeria*

**Corresponding Author*

***Abstract:***

**Background and Objective: According to WHO most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment.. This work is aim at Studying the trend and progress on Covid -19 pandemic from 29th January to 4th of February 2022 across different countries of the world.**

**Material and Method: Data from one hundred and seventy two (172) countries and regions of the world were gotten from United Nations Geoscheme. Results were collated and subsequently compared to the values obtained for USA.**

**Result: Europe and America still have high situation rate of the virus.Compared to the USA most European countries tend to have lower mortality factor when compared to incidence factor. Asia also has a relatively high incidence and mortality factor, while Africa has little to no comparism factor value. The Omicron is the most predominant strain with high infectivity rate as the original virus.**

**Conclusion: despite various variant of COVID-19, Africa appears to developed a natural surval mechanism. There is therefore need for the rest of the globe to further investigate the reason for this spared onslaught and develop vaccine based on AfricansCOVID-19 antibody make up so as to develop a more robost immunity**

***Keyword*: Africa, USA, COVID-19, America, Nigeria, Europe, continent**

## I. INTRODUCTION

Coronaviruses are a family of viruses that can cause respiratory illness in humans (1,2). They are called "corona" because of crown-like spikes on the surface of the virus (3). Severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and the common cold are examples of coronaviruses that cause illness in humans (4,5,6).The new strain of coronavirus — COVID-19 — was first reported in Wuhan, China in December 2019 (7). The virus has since spread to all continents. Coronaviruses are often found in bats, cats and camels (8,9). The viruses live in but do not infect the animals. Sometimes these viruses then spread to different animal species. The viruses may change (mutate) as they transfer to other species. Eventually, the virus can jump from animal species and begins to infect humans (11). In the case of COVID-19, the first people infected in Wuhan, China are thought to have contracted the virus at a food market that sold meat, fish and live animals (12). Although researchers don't know exactly how people were infected, they already have evidence that the virus can be spread directly from person to person through close contact. The Omicron variant (B.1.1.529) is a variant of SARS-CoV-2 (the virus that causes COVID-19) that was first reported to the World Health Organization (WHO) from South Africa on 24 November 2021 (13). Omicron multiplies around 70 times faster than the Delta variant in the bronchi (lung airways) but evidence suggests it is less severe than previous strains, especially compared to the Delta variant. Omicron might be less able to penetrate deep lung tissue (14).

There is serious concern and study on the different waves of the disease has. This have been suggested to be due to change in weather and continuously mutated strain of the virus that has been identified (11, 12,14). There is the need to study this cases per country and region with respect to the virulent and spreadability of the mutated strain. Also, some interesting studies has been carried out on the dermographic, nature and strength of the virus, but analyzing an updated information per time is also predicated in managing the trend (16,17). The aim of this study is to provide update report on progress on Covid -19 pandemic from 19th-25th January, 2022 across different countries of the world**.**

*Study Area***:** Data from 29th January to 4th February, 2022 were obtained from United Nations Geoscheme and WHO (WHO 2021).

## II. METHODOLOGY

One hundred and seventy two (172) nations from different continents and regions of the

world were selected for this study. Data used where obtained from 29th January to 4th of February, 2022 from United Nations Geoscheme and WHO (16). The Data obtained for these countries over 7 days per 100000 populations, were analyzed and compared directly with the values gotten for USA. USA was used as a Comparism Factor (CF) or Oyepata Factor (OF) because it is a country with one of the best health system and also has highest COVID-19 cases with a relatively large population in the world.

## III. STATISTICAL ANALYSIS

In this work markers as cumulative cases and cumulative cases of death per 1,000,000 population were compared against values of USA. Bivariate analysis, was used and Chi-square test, to compare proportions of all variables. In reporting this study, country observations are scaled to present a comparison of two countries similar in all other respects. Thus, rate ratios less than one insinuate that lesser levels of a given characteristic are associated with lesser rates of infection or mortality and vice versa.

## IV. RESULT

Europe and America still have high situation rate of the virus. Compared to the USA most European countries tend to have lower mortality factor when compared to incidence factor. Asia also has a relatively high incidence and mortality factor, while Africa has little to no comparism factor value. (Table 1).

Table 1: Cses and Death of COVID-19

| S/N | Country, Other | Cases in the last 7 days | Cases in the last 7 days/1M pop (A) | Deaths in the last 7 days/1M pop (A) | A/8615 © | B/49 (D) |
|---|---|---|---|---|---|---|
| 1 | USA | 2,878,149 | 8,615 | 49 | 1.00 | 1.00 |
| 2 | France | 2,255,078 | 34,427 | 28 | 4.00 | 0.57 |
| 3 | India | 1,545,769 | 1,103 | 5 | 0.13 | 0.10 |
| 4 | Brazil | 1,291,061 | 6,006 | 20 | 0.70 | 0.41 |
| 5 | Germany | 1,123,263 | 13,339 | 12 | 1.55 | 0.24 |
| 6 | Italy | 900,067 | 14,921 | 41 | 1.73 | 0.84 |
| 7 | Russia | 745,804 | 5,107 | 31 | 0.59 | 0.63 |
| 8 | UK | 646,370 | 9,443 | 24 | 1.10 | 0.49 |
| 9 | Spain | 643,359 | 13,752 | 27 | 1.60 | 0.55 |
| 10 | Turkey | 631,990 | 7,368 | 15 | 0.86 | 0.31 |
| 11 | Netherlands | 529,820 | 30,813 | 3 | 3.58 | 0.06 |
| 12 | Japan | 513,999 | 4,084 | 2 | 0.47 | 0.04 |
| 13 | Israel | 443,150 | 47,518 | 47 | 5.52 | 0.96 |
| 14 | Argentina | 386,258 | 8,424 | 39 | 0.98 | 0.80 |
| 15 | Portugal | 378,450 | 37,287 | 30 | 4.33 | 0.61 |
| 16 | Poland | 340,914 | 9,023 | 35 | 1.05 | 0.71 |
| 17 | Belgium | 324,520 | 27,809 | 19 | 3.23 | 0.39 |
| 18 | Australia | 290,493 | 11,186 | 23 | 1.30 | 0.47 |
| 19 | Denmark | 285,374 | 48,995 | 23 | 5.69 | 0.47 |
| 20 | Mexico | 256,823 | 1,959 | 21 | 0.23 | 0.43 |
| 21 | Czechia | 248,127 | 23,102 | 15 | 2.68 | 0.31 |
| 22 | Peru | 241,409 | 7,164 | 41 | 0.83 | 0.84 |
| 23 | Austria | 230,875 | 25,405 | 12 | 2.95 | 0.24 |
| 24 | Switzerland | 219,435 | 25,064 | 7 | 2.91 | 0.14 |
| 25 | Sweden | 209,112 | 20,503 | 9 | 2.38 | 0.18 |
| 26 | Romania | 207,647 | 10,909 | 25 | 1.27 | 0.51 |
| 27 | Ukraine | 205,775 | 4,750 | 22 | 0.55 | 0.45 |
| 28 | Chile | 189,215 | 9,765 | 10 | 1.13 | 0.20 |
| 29 | Iran | 140,685 | 1,642 | 3 | 0.19 | 0.06 |
| 30 | Norway | 138,719 | 25,275 | 0.2 | 2.93 | 0.00 |
| 31 | Greece | 135,456 | 13,097 | 73 | 1.52 | 1.49 |
| 32 | Georgia | 124,970 | 31,423 | 61 | 3.65 | 1.24 |
| 33 | Colombia | 120,805 | 2,335 | 35 | 0.27 | 0.71 |
| 34 | Serbia | 117,165 | 13,496 | 40 | 1.57 | 0.82 |
| 35 | S. Korea | 114,063 | 2,222 | 4 | 0.26 | 0.08 |
| 36 | Hungary | 111,725 | 11,612 | 47 | 1.35 | 0.96 |
| 37 | Philippines | 110,133 | 984 | 4 | 0.11 | 0.08 |
| 38 | Canada | 101,983 | 2,665 | 27 | 0.31 | 0.55 |
| 39 | Vietnam | 99,596 | 1,009 | 8 | 0.12 | 0.16 |
| 40 | Slovenia | 97,700 | 46,985 | 39 | 5.45 | 0.80 |
| 41 | Bangladesh | 95,990 | 574 | 1 | 0.07 | 0.02 |
| 42 | Slovakia | 93,243 | 17,065 | 28 | 1.98 | 0.57 |
| 43 | Jordan | 78,751 | 7,599 | 13 | 0.88 | 0.27 |
| 44 | Indonesia | 75,208 | 270 | 0.4 | 0.03 | 0.01 |
| 45 | Lithuania | 74,335 | 27,924 | 45 | 3.24 | 0.92 |
| 46 | Kazakhstan | 72,257 | 3,777 | 6 | 0.44 | 0.12 |
| 47 | Uruguay | 70,093 | 20,068 | 50 | 2.33 | 1.02 |
| 48 | Bulgaria | 59,432 | 8,657 | 78 | 1.00 | 1.59 |
| 49 | Croatia | 57,190 | 14,068 | 96 | 1.63 | 1.96 |
| 50 | Thailand | 56,607 | 808 | 2 | 0.09 | 0.04 |
| 51 | Lebanon | 54,378 | 8,024 | 16 | 0.93 | 0.33 |
| 52 | Tunisia | 51,369 | 4,276 | 26 | 0.50 | 0.53 |
| 53 | Iraq | 50,797 | 1,220 | 2 | 0.14 | 0.04 |
| 54 | Pakistan | 49,214 | 216 | 0.8 | 0.03 | 0.02 |
| 55 | Panama | 46,501 | 10,515 | 28 | 1.22 | 0.57 |
| 56 | Bahrain | 44,224 | 24,636 | 5 | 2.86 | 0.10 |
| 57 | Kuwait | 43,781 | 10,017 | 3 | 1.16 | 0.06 |
| 58 | Paraguay | 41,066 | 5,648 | 46 | 0.66 | 0.94 |
| 59 | Ecuador | 40,140 | 2,222 | 9 | 0.26 | 0.18 |
| 60 | Costa Rica | 39,787 | 7,699 | 20 | 0.89 | 0.41 |
| 61 | Palestine | 37,282 | 7,049 | 8 | 0.82 | 0.16 |

| 62 | Finland | 36,759 | 6,618 | 25 | 0.77 | 0.51 |
|---|---|---|---|---|---|---|
| 63 | Singapore | 36,305 | 6,129 | 1 | 0.71 | 0.02 |
| 64 | Malaysia | 36,099 | 1,093 | 2 | 0.13 | 0.04 |
| 65 | Bolivia | 35,122 | 2,945 | 23 | 0.34 | 0.47 |
| 66 | Ireland | 33,550 | 6,676 | 10 | 0.77 | 0.20 |
| 67 | Nepal | 29,690 | 991 | 3 | 0.12 | 0.06 |
| 68 | Saudi Arabia | 29,392 | 824 | 0.5 | 0.10 | 0.01 |
| 69 | Morocco | 28,271 | 752 | 6 | 0.09 | 0.12 |
| 70 | Moldova | 27,677 | 6,886 | 25 | 0.80 | 0.51 |
| 71 | Azerbaijan | 26,737 | 2,600 | 12 | 0.30 | 0.24 |
| 72 | Libya | 23,111 | 3,293 | 11 | 0.38 | 0.22 |
| 73 | South Africa | 22,419 | 371 | 15 | 0.04 | 0.31 |
| 74 | Cuba | 18,217 | 1,610 | 3 | 0.19 | 0.06 |
| 75 | Cyprus | 17,896 | 14,653 | 17 | 1.70 | 0.35 |
| 76 | Armenia | 17,191 | 5,784 | 8 | 0.67 | 0.16 |
| 77 | UAE | 16,310 | 1,618 | 2 | 0.19 | 0.04 |
| 78 | Oman | 15,544 | 2,926 | 3 | 0.34 | 0.06 |
| 79 | Belarus | 14,664 | 1,553 | 11 | 0.18 | 0.22 |
| 80 | Luxembourg | 14,657 | 22,827 | 12 | 2.65 | 0.24 |
| 81 | Venezuela | 14,650 | 518 | 1 | 0.06 | 0.02 |
| 82 | Egypt | 14,644 | 139 | 2 | 0.02 | 0.04 |
| 83 | Mongolia | 14,260 | 4,242 | 4 | 0.49 | 0.08 |
| 84 | Bosnia and Herzegovina | 12,415 | 3,822 | 111 | 0.44 | 2.27 |
| 85 | Dominican Republic | 12,192 | 1,106 | 2 | 0.13 | 0.04 |
| 86 | Algeria | 12,114 | 269 | 2 | 0.03 | 0.04 |
| 87 | Qatar | 11,739 | 4,181 | 4 | 0.49 | 0.08 |
| 88 | North Macedonia | 11,569 | 5,553 | 85 | 0.64 | 1.73 |
| 89 | Guadeloupe | 10,554 | 26,370 | 27 | 3.06 | 0.55 |
| 90 | Martinique | 9,983 | 26,635 | 40 | 3.09 | 0.82 |
| 91 | Iceland | 9,144 | 26,523 | 3 | 3.08 | 0.06 |
| 92 | Albania | 9,091 | 3,164 | 13 | 0.37 | 0.27 |
| 93 | Sri Lanka | 8,668 | 402 | 7 | 0.05 | 0.14 |
| 94 | Uzbekistan | 7,837 | 229 | 0.7 | 0.03 | 0.01 |
| 95 | Botswana | 7,132 | 2,939 | 7 | 0.34 | 0.14 |
| 96 | Trinidad and Tobago | 4,611 | 3,278 | 55 | 0.38 | 1.12 |
| 97 | Barbados | 4,584 | 15,920 | 14 | 1.85 | 0.29 |
| 98 | Afghanistan | 3,479 | 86 | 0.5 | 0.01 | 0.01 |
| 99 | Jamaica | 3,370 | 1,130 | 18 | 0.13 | 0.37 |
| 100 | Zambia | 2,988 | 156 | 0.8 | 0.02 | 0.02 |
| 101 | Cameroon | 2,605 | 94 | 0.5 | 0.01 | 0.01 |
| 102 | Ethiopia | 2,430 | 20 | 0.5 | 0.00 | 0.01 |
| 103 | Sudan | 2,375 | 52 | 0.7 | 0.01 | 0.01 |

| 104 | Madagascar | 1,944 | 67 | 2 | 0.01 | 0.04 |
|---|---|---|---|---|---|---|
| 105 | Malta | 1,572 | 3,545 | 34 | 0.41 | 0.69 |
| 106 | Honduras | 1,492 | 147 | 2 | 0.02 | 0.04 |
| 107 | Andorra | 1,257 | 16,228 | 0 | 1.88 | 0.00 |
| 108 | Bhutan | 1,252 | 1,595 | 1 | 0.19 | 0.02 |
| 109 | Uganda | 1,151 | 24 | 0.9 | 0.00 | 0.02 |
| 110 | Zimbabwe | 1,075 | 71 | 2 | 0.01 | 0.04 |
| 111 | Mozambique | 1,057 | 32 | 0.4 | 0.00 | 0.01 |
| 112 | Ghana | 837 | 26 | 0.5 | 0.00 | 0.01 |
| 113 | Grenada | 832 | 7,340 | 44 | 0.85 | 0.90 |
| 114 | Hong Kong | 807 | 106 | 0 | 0.01 | 0.00 |
| 115 | Greenland | 793 | 13,930 | 35 | 1.62 | 0.71 |
| 116 | Fiji | 774 | 854 | 24 | 0.10 | 0.49 |
| 117 | Haiti | 762 | 66 | 0.8 | 0.01 | 0.02 |
| 118 | Gabon | 727 | 315 | 0.4 | 0.04 | 0.01 |
| 119 | Monaco | 712 | 17,942 | 50 | 2.08 | 1.02 |
| 120 | Nigeria | 662 | 3 | 0 | 0.00 | 0.00 |
| 121 | Dominica | 660 | 9,133 | 0 | 1.06 | 0.00 |
| 122 | Mauritania | 650 | 134 | 5 | 0.02 | 0.10 |
| 123 | Angola | 632 | 18 | 0.1 | 0.00 | 0.00 |
| 124 | DRC | 619 | 7 | 0 | 0.00 | 0.00 |
| 125 | Antigua and Barbuda | 604 | 6,088 | 50 | 0.71 | 1.02 |
| 126 | Senegal | 585 | 34 | 0.9 | 0.00 | 0.02 |
| 127 | Papua New Guinea | 575 | 62 | 0 | 0.01 | 0.00 |
| 128 | Aruba | 560 | 5,210 | 0 | 0.60 | 0.00 |
| 129 | Malawi | 559 | 28 | 1 | 0.00 | 0.02 |
| 130 | Rwanda | 555 | 41 | 0.8 | 0.00 | 0.02 |
| 131 | Namibia | 518 | 198 | 17 | 0.02 | 0.35 |
| 132 | Caribbean Netherlands | 507 | 19,054 | 38 | 2.21 | 0.78 |
| 133 | French Polynesia | 472 | 1,665 | 0 | 0.19 | 0.00 |
| 134 | Taiwan | 439 | 18 | 0 | 0.00 | 0.00 |
| 135 | China | 434 | 0.3 | 0 | 0.00 | 0.00 |
| 136 | Ivory Coast | 420 | 15 | 0.1 | 0.00 | 0.00 |
| 137 | Syria | 408 | 22 | 1 | 0.00 | 0.02 |
| 138 | Mayotte | 395 | 1,395 | 0 | 0.16 | 0.00 |
| 139 | Burundi | 390 | 31 | 0 | 0.00 | 0.00 |
| 140 | Bahamas | 368 | 922 | 38 | 0.11 | 0.78 |
| 141 | Brunei | 328 | 739 | 0 | 0.09 | 0.00 |
| 142 | Tanzania | 310 | 5 | 0.2 | 0.00 | 0.00 |
| 143 | Cambodia | 296 | 17 | 0 | 0.00 | 0.00 |
| 144 | Yemen | 292 | 9 | 0.4 | 0.00 | 0.01 |
| 145 | Gambia | 291 | 115 | 7 | 0.01 | 0.14 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 146 | Congo | 220 | 38 | 0 | 0.00 | 0.00 |
| 147 | Guinea | 215 | 16 | 0.2 | 0.00 | 0.00 |
| 148 | Sint Maarten | 214 | 4,903 | 0 | 0.57 | 0.00 |
| 149 | Saint Pierre Miquelon | 198 | 34,441 | 0 | 4.00 | 0.00 |
| 150 | Benin | 141 | 11 | 0 | 0.00 | 0.00 |
| 151 | Togo | 137 | 16 | 0.1 | 0.00 | 0.00 |
| 152 | Burkina Faso | 135 | 6 | 0.8 | 0.00 | 0.02 |
| 153 | Guinea-Bissau | 102 | 50 | 1 | 0.01 | 0.02 |
| 154 | Djibouti | 100 | 99 | 0 | 0.01 | 0.00 |
| 155 | Tajikistan | 97 | 10 | 0 | 0.00 | 0.00 |
| 156 | Equatorial Guinea | 96 | 65 | 0.7 | 0.01 | 0.01 |
| 157 | Chad | 82 | 5 | 0 | 0.00 | 0.00 |
| 158 | CAR | 79 | 16 | 0.2 | 0.00 | 0.00 |
| 159 | South Sudan | 72 | 6 | 0 | 0.00 | 0.00 |
| 160 | Nicaragua | 59 | 9 | 0.1 | 0.00 | 0.00 |
| 161 | Anguilla | 54 | 3,549 | 66 | 0.41 | 1.35 |
| 162 | Niger | 52 | 2 | 0.2 | 0.00 | 0.00 |
| 163 | Sao Tome and Principe | 50 | 222 | 4 | 0.03 | 0.08 |
| 164 | British Virgin Islands | 30 | 982 | 0 | 0.11 | 0.00 |
| 165 | Liberia | 29 | 6 | 0.2 | 0.00 | 0.00 |
| 166 | St. Vincent Grenadines | 26 | 233 | 18 | 0.03 | 0.37 |
| 167 | Comoros | 18 | 20 | 1 | 0.00 | 0.02 |
| 168 | Sierra Leone | 16 | 2 | 0 | 0.00 | 0.00 |
| 169 | Samoa | 6 | 30 | 0 | 0.00 | 0.00 |
| 170 | Falkland Islands | 3 | 824 | 0 | 0.10 | 0.00 |
| 171 | Montserrat | 2 | 400 | 0 | 0.05 | 0.00 |
| 172 | Somalia | 0 | 0 | 0 | 0.00 | 0.00 |

*Key:*

Data used were obtained from WHO/World meter's as at 29thJanuary -4thFebuary, 2022
Figures obtained for USA were used in determing the comparism factor (CF) or Oyepata Factor which is a ratio of figure obtained to that of a particular country population divided by that of the USA.
Values of CF1 (or OF1) and CF2 (or OF2) represent case/incidence and mortality index.
Factor of more than 1 = very high infection and mortality index
Factor of approximately 1 = high infection and mortality index
Factor of ≤1 but ≥0.5 = moderately high infection and mortality index
Factor of ≤ 0.5 but ≥ 0.1 = low infection and mortality index
Factor of <0.1 = very low infection, mortality and recovery index

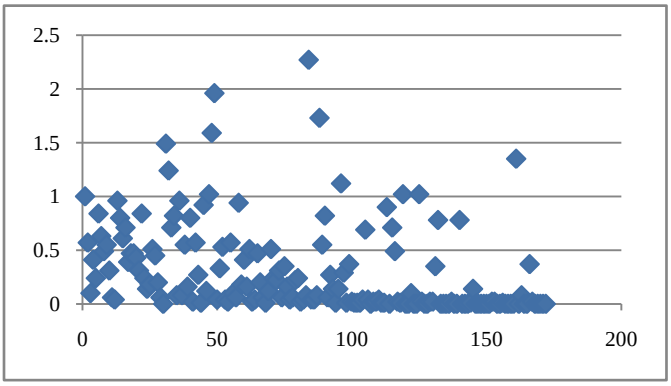


Figure 1: Graph Showing Comparism Factor Per Country Relative to USA29th of January to 4th of February, 2022.

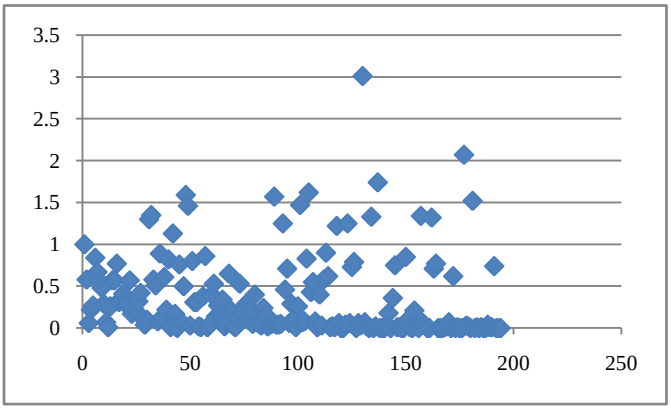


Figure 2: Graph Showing Death Oyepata Factor Caused by Covid-19 for Each Country Relative to USA as at 19th to 25th, January, 2022.

## V. DISCUSSION

From available data, Europe and America have high mortality and incidence report of the virus. Also, Most European countries have lower mortality factor when compared to incidence factor while Americans have higher mortality compared to cases. With the exception of South Africa and Botswana, Africa has little to no comparism factor value. It's normal for viruses to mutate — especially coronaviruses and influenza viruses. These mutations create new variants of the virus (18). Sometimes the variants are less contagious, less severe or have slightly different presenting symptoms (19). Unfortunately, the delta variant and Omicron of COVID-19 is more highly contagious and more likely to result in severe illness, though studies are still on still going for better understanding (13,20).

Africa is known to be an acceptable home to several infectious diseases such as dengue fever, small pox, measles chicken pox, Ebola, and polio disease (21,22).In many cases, vaccination has been developed against some of this infection or the body immune system has successfully found a way to defend against this pathogens (24,25,26). This may have had a beneficial effect against exposure to same or related organism.

There is the likelihood of the virus spreading fast across African populations within a minimal period of time causing a large proportion to have been exposed to the virus without showing obvious symptoms and may have possibly recovered fully. Therefore, there is need for a more robust COVID-19 testing; antibody testing, which will explain who has been exposed than the popular antigen testing which only provides active disease state. This will significantly affect the quantity and quality time and resources that a give region need. Gates believed that developing countries need better health systems (27,28). At the time that the Omicron variant first appeared in South Africa, less than a quarter of its population was fully vaccinated, and very few people had received booster shots. Some experts believe this low vaccination rate gave the virus much more opportunity to mutate into new forms. And while Omicron appears to be milder than earlier forms of Covid, it could have gone the other way. Better healthcare systems in developing nations would also mean more widespread testing, and less risk of people infecting others if they have the virus but don't know it (29,30).

America continent, appears to have more infectivity and higher reports of mortality from the new variant of Covid-19. Africa has been least plagued by the all variant at all phases. Also, most European countries have lesser mortality ratio when compared to American continents. These observations interesting, compared previous works on the cumulative effect of the virus (30,31). Africans appear to be unaffected from this seemly uncontrollable and lethal unleash. Apart from fewer cases of the infection, Africans have showed potential to have much lesser mortality even when compared to case of the infection (32,33). This suggests that Africans body systemhave over time developed a more progressive, robust and faster immune response that reduces chances of the virus causing disease related health complication. Compared to previous cumulative observation, though mortality rate remained higher than other western countries, USA has made remarkable stride in preventing and reducing the cases of infection compared to several other countries that suffered same fate from the virus. From available data, Africa which generally is classified as third world or clearly underdeveloped do not have severe medical consequences of the infection, and when infected they tends to recover faster with lower chance of complications and mortality.

As previously noted, Africans lives as a community and in dense clusters which is obviously different to most western countries that exist in solitary system (34,36,37). Thus, it is expected that most individuals in Africa may have been exposed to the virus without knowing or developing major symptoms. This has made several observers around the world to speculate that Africa may consequentially become a graveyard. Reasons for this fortunately unexpected result have puzzled many analyst around the world. Studies have shown, that because of poor health and environment, the immune systems of African children tends to develop faster and more robust compared to Dutch children (38,39). Childhood Exposure to pathogenic organism may have boasted the immune system and protect children from developing certain allergies and other infectious diseases, on

later exposure to the similar allergen or pathogen(40,41,42). This view is also supported with data and comparism factor obtained from Haiti. Haiti is currently the poorest country in the Latin America and Caribbean region and among least developed countries in the world (43,44,45). They have one the least case of infection and mortality resulting in little to no significant value of comparism factor. Thus, childhood or early exposure to some diseases in poor countries may have encouraged a more robust immune response to same or related infection. Therefore, several African countriesbe both vulnerable and potentially more defensive against the coronavirus.

## VI. CONCLUSION

Despite various variant of COVID-19, Africa appears to have developed a very robust natural survival mechanism. There is therefore need for the rest of the globe to further investigate the reason for this spared onslaught and develop vaccine based on Africans COVID-19 antibody make up so as to develop a more robust immunity rather attempting the reverse.

*Conflict of Interest*

The authors declare that there are not any potential conflicts of interest

## ACKNOWLEDGEMENT

The authors wish to thank everyone who has contributed to the collation and analysis of data. Special recognition to United Nations Geo scheme and WHO granting access to information.

## REFERENCE

[1] COVID-19 Weekly Epidemiological Update, Edition 77" (PDF). World Health Organization. 1 February 2022. Archived (PDF) from the original on 3 February 2022. Retrieved 2 February 2022.

[2] Joseph O. S, Sabastine A. Z, Joseph O. T. (2021). Global Implication of Differential Impacts of Covid-19 on Different Countries Using the USA as A Comparism Factor. Journal of Nursing and Health Science. Volume 10, Issue 5. PP 36-44.

[3] Builders M., Joseph O. S., Timothy O. O., Philip B. (2020). Antimalarial Drugs and COVID -19. Sumerianz Journal of Medical and Healthcare. Vol. 3, No. 12, pp. 111-116.

[4] Fan Y, Zhao K, Shi ZL, Zhou P. Bat Corona viruses in China. Viruses. 2019.11 (3): 210-223.

[5] Modupe I. B., Oyepata S. J. and Akpobome R. V. (2019). Effect of Parkia biglobosa extract on open skin wound healing in dexamethasone - induced hyperglycaemia and histological assessment in rats. African Journal of Pharmacy and Pharmacology. Vol. 13(8), pp. 84-89.

[6] Joseph O.S., Builders M., Emem E.Uand Joseph O.T. (2019). effect of ethanol leaf extract of cassia angustifolia extract on liver of wister rats. Global Scientific Journal. Volume 8, Issue 9. Page 1112-11120.

[7] Nussbaumer-Streit B, Mayr V, Dobrescu AI, Chapman A, Persad E, Klerings I, et al. (2020). "Quarantine alone or in combination with other public health measures to control COVID-19: a rapid review". The Cochrane Database of Systematic Reviews. **4**:

CD013574. doi:10.1002/14651858.CD013574. PMC 7141753. P MID 32267544

[8] Page J, Hinshaw D, McKay B (26 February 2021). In Hunt for Covid-19 Origin, Patient Zero Points to Second Wuhan Market – The man with the first confirmed infection of the new coronavirus told the WHO team that his parents had shopped there". The Wall Street Journal. Retrieved 27 February 2021.

[9] Joseph OS , Builders M , Joseph O T , Famojuro TI, Ogira JO, Moses FD, Musa TL. (2021). Effect of the Demographic of Covid-19 on Different Countries; Using the USA for Comparism. International journal of multidisciplinary research and analysis. Volume 04 Issue 02. Page 193-203.

[10] COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) . ArcGIS. Johns Hopkins University. Retrieved 3 November 2021.

[11] Islam MA (2021). "Prevalence and characteristics of fever in adult and paediatric patients with coronavirus disease 2019 (COVID-19): A systematic review and meta-analysis of 17515 patients". PLOSONE. **16** (4):e0249788. Bibcode:2021PLoSO..164 9788I. doi:10.1371/journal.pone.0249788. PMC 8023501. PMID 3 3822812

[12] Islam MA (2020). "Prevalence of Headache in Patients With Coronavirus Disease 2019 (COVID-19): A Systematic Review and Meta-Analysis of 14,275 Patients". Frontiers in Neurology. **11**: 562634.

[13] Joseph O. S., Builders M., Joseph O. T., Sabastine A. Z. (2020). Assessing differential impacts of COVID-19 on African countries: A comparative study. International Journal of Research and Innovation in Applied Science. Vol. 5, Issue 5. Page 197-203

[14] Classification of Omicron (B.1.1.529): SARS-CoV-2 Variant of Concern". *World Health Organization*. 26 November 2021. Archived from the original on 26 November 2021. Retrieved 26 November 2021.

[15] Rollock, Melissa (30 December 2021). "Chief Medical Officer: Omicron Is Here". *GIS*. Retrieved 2 January 2022.

[16] Hirose R, Itoh Y, Ikegaya H, Miyazaki H, Watanabe N, Yoshida T, et al. (19 January 2022). "Differences in environmental stability among SARS-CoV-2 variants of concern: Omicron has higher stability". bioRxiv 10.1101/2022.01.18.476607

[17] Saniasiaya J, Islam MA (2021). "Prevalence of Olfactory Dysfunction in Coronavirus Disease (2019). (COVID-19): A Meta-analysis of 27,492 Patients". The Laryngoscope. **131** (4): 865–878. doi:10.1002/lary.29286. ISSN 0023- 852X. PMC 7753439. PMID 33219539.

[18] Wu X, Nethery RC, Sabath MB, Braun D, Dominici F (November 2020). "Air pollution and COVID-19 mortality in the United States: Strengths and limitations of an ecological regression analysis". Science Advances. **6** (45): 342-355.

[19] Joseph O.S, Builders M., Joseph O, T. , Zubairu S. A., Musa T. And Oyepata P. J (2019). Sub-Acute Toxicity Study of Ethanol Leaf Extract of Ocimum Canum on Liver of Wister Rats. International Journal of Research and Scientific Innovation. Volume VI (V). Pp. 364-369.

[20] Islam MA (April 2021). "Prevalence and characteristics of fever in adult and paediatric patients with coronavirus disease 2019 (COVID-19): A systematic review and meta-analysis of 17515 patients. PLOS ONE. **16** (4): Pg 224-234..

[21] Joseph O. S, Sabastine A. Z, Joseph O. T. (2021). Clinical evaluation of the potential benefits of taking Moringa oleifera on blood triglyceride and cholesterol level in patient taking Tenofovir/Lamivudine/Efavirenz (TLE) combination. Journal of Pharmaceutical Science & Research. Vol. 13(10), 623-629.

[22] Oyebadejo S. A, Joseph O. S, Adesite S. O and Omorilewa A.O. (2019). Effect of Citrus Limon Juice and Tamoxifen on the Tumour growth mass Indices, Cell Proliferation, Cell Viability and Cytogenetic (Mitotic Index) of Sprague Dawley Rats Induced MCF-7 Breast Cancer Cells. Saudi Journal of Biomedical Research. (4). Pg. 216 - 225.

[23] Cherry, J, Demmler-Harrison GJ, Kaplan SL.; Steinbach WJ, Hotez PJ. (2018). Feign and Cherry's Textbook of Pediatric Infectious Diseases. Elsevier Health Sciences. p. 453-466.

[24] Builder M. I., Anzaku S. A. and Joseph S. O. (2019). Effectiveness of intermittent preventive treatment in pregnancy with sulphadoxine-pyrimethamine against malaria in northern Nigeria. International Journal of Recent Scientific Research Vol. 10 (05), pp. 32295-32299.

[25] Jude E. O., Joseph O. S. and Emem E. U. (2016). Nephroprotective activity of Homalium letestui stem extract against paracetamol induced kidney injury. Journal of Experimental and Integrative Medicine. Volume 6 (1): 38-43.

[26] Joseph O S., Musa T L., Joseph O T. , Ibhafidon I. (2020). The Dynamics of Differential Impacts of COVID-19 on African Countries Compared to Other Parts of the World. International journal of multidisciplinary research and analysis. Volume 03 Issue 11. Page 185-198.

[27] Wazis C.H., Joseph O.S., Modupe B, Joseph O.P. (2020). Effect of ethanol leaf extract of cassia angustifolia extract on heart and lipid profile of wister rats. African Journal of Pharmaceutical Research & Development. Vol. 12 No.1. Page 1-8.

[28] Saniasiaya J, Islam MA (November 2020). "Prevalence and Characteristics of Taste Disorders in Cases of COVID-19: A Meta-analysis of 29,349 Patients". Otolaryngology–Head and Neck Surgery. **165** (1): 33–42.

[29] Agyeman AA, Chin KL, Landersdorfer CB, Liew D, Ofori-Asenso R (August 2020). "Smell and Taste Dysfunction in Patients With COVID-19: A Systematic Review and Meta-analysis". Mayo Clin. Proc. **95** (8): 1621–1631.

[30] Builders M. I.,Joseph S.O., B. Peter U. (2020). A Survey of Wound Care Practices by Nurses in a Clinical Setting. International Journal of Healthcare and Medical Sciences. Vol. 6, Issue. 5, Page 74-81.

[31] Jude E. O., Joseph O. S. and Emem E. U. (2016). Nephroprotective activity of Homalium letestui stem extract against paracetamol induced kidney injury. Journal of Experimental and Integrative Medicine. Volume 6 (1): 38-43.

[32] Joseph O.S., Builders M., Emem E.Uand Joseph O.T. (2019). effect of ethanol leaf extract of Cassia angustifolia extract on kidney of Wister Rats. Global Scientific Journal. Volume 8, Issue 9. Page 1023-1031.

[33] Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. "Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study". Lancet. 2020. 395 (10223): 507–513

[34] Domingo JL, Marquès M, Rovira J (September 2020). "Influence of airborne transmission of SARS-CoV-2 on COVID-19 pandemic. A review". Environmental Research. **188**: 66-73.

[35] Wang L, Wang Y, Ye D, Liu Q (June 2020). "Review of the 2019 novel coronavirus (SARS-CoV-2) based on current evidence". International Journal of Antimicrobial Agents. **55** (6): 105948. doi:10.1016/j.ijantimicag.2020.105948

[36] Joseph O. S., Jude E.O and Joseph O. T (2018). Hepatoprotective activity of extract of Homalium Letestui stem against carbon tetrachloride-induced liver injury. Advance Herbal Medicine. Vol 4(4), Page 1-11.

[37] COVID-19 vaccine surveillance report Week 4" (PDF). UK Health Security Agency. 27 January 2022. Archived (PDF) from the original on 27 January 2022. Retrieved 27 January 2022.

[38] Enhancing response to Omicron SARS-CoV-2 variant: Technical brief and priority actions for Member States" (PDF). World Health Organization. 21 January 2022. Archived (PDF) from the original on 27 January 2022. Retrieved 24 January 2022.

[39] Joseph O. S., Builders M., Joseph O. T., Zubairu S.A., Musa T. and Oyepata p.j. (2019). Sub-acute toxicity study of ethanol leaf extract of Ocimum canum onthe kidney of wistar rats. African Journal of Pharmaceutical Research & Development. Vol. 11 No.1. Page 1-7.

[40] Tamara A, Tahapary DL (July 2020). "Obesity as a predictor for a poor prognosis of COVID-19: A systematic review". Diabetes & Metabolic Syndrome. **14** (4): 655–659.

[41] Solomon, I.P, Oyebadejo, S.A., Ukpo E.M. and Joseph, O.S. (2015). Changes in serum electrolyte, creatinine and urea of fresh

Citrus limon juice administered to growing rabbits (Oryctolagus cuniculus). International Journal of Agricultural Science Research. Vol. 4(8), pp. 180-183.

[42] Oran DP, Topol EJ (January 2021). "The Proportion of SARS-CoV-2 Infections That Are Asymptomatic : A Systematic Review". Annals of Internal Medicine. **174** (5): M20-6976.

[43] Jonah, S. A. and Joseph, O. S. (2016). Quantification of Antinociceptive and Anti-Inflammatory Potentials of Different Ocimum gratissimum Linn. Leaf Extracts in Whistar Albino Rats. European Journal of Medicinal Plants. Volume 17(3). Page 1-8.

[44] Jude E. O., Joseph O. S. and Emem E. U. (2016). Nephroprotective activity of Homalium letestui stem extract against paracetamol induced kidney injury. Journal of Experimental and Integrative Medicine. Volume 6 (1): 38-43.

[45] Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease (COVID-19) . U.S. Centers for Disease Control and Prevention (CDC). 6 April 2020. Archived from the original on 2 March 2020. Retrieved 19 April 2020.

[46] Sabastine A Z, Joseph O S, Joseph O T (2021). Effect of ethanol leaf extract of Terminalia chebula extracton kidney of wister rats. Global scientific Journal. Volume 9, Issue 2. Page 514-526.