

**Update report on Virological and mortality distribution and implication of COVID-19 pandemic across the globe from 28<sup>th</sup> January to 3<sup>rd</sup> February 2022** **Retracted article**

Joseph Oyepata Simeon\*<sup>1</sup> Joseph Opeyemi Tosin <sup>2</sup>

<sup>1</sup> Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, Federal University, Oye–Ekiti, Ekiti State, Nigeria.

<sup>2</sup> Department of Pharmacy, University College Hospital, Ibadan, Oyo State, Nigeria.

\*. **Corresponding author:** Joseph Oyepata Simeon, Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, Federal University, Oye–Ekiti, Ekiti State, Nigeria. Email: [oyepata.joseph@fuoye.edu.ng](mailto:oyepata.joseph@fuoye.edu.ng).

**Cite this article:** Simeon, J.O., Tosin, J.O. Update report on Virological and mortality distribution and implication of COVID-19 pandemic across the globe from 28<sup>th</sup> January to 3<sup>rd</sup> February 2022. Int J Epidemiol Health Sci 2023;4: e47. Doi: 10.51757/IJEHS.4.2023.696940.

**Abstract**

**Background and Objective:** Scientists and world leaders are still trying to understand COVID-19 and its potential global consequences. While there have been some successes, there are still many that remain unknown. This study provides an update report on the virological and immunological distribution and implications of the COVID-19 pandemic around the world from January 28th to February 3rd, 2022.

**Material and Method:** The United Nations geoscheme was used to obtain data from 196 countries and regions around the world. The results were compiled and compared to the values obtained for the United States.

**Results:** When available data was compared to that of the United States, the American continent had a higher mortality comparison factor than infection cases, whereas the European continents had a higher infectious comparison value than mortality value. With the exception of South Africa and Botswana, the African continents appear unconcerned about the value of mortality and infectivity.

**Conclusion:** The new wave and virus variant have caused a resurgence in its global impact. There is a need to understand how Africa has survived all variants of the virus despite having few medical resources.

**Keywords:** COVID-19, Continent, Europe, Africa, Nigeria, America, USA

**Introduction**

The COVID-19 epidemic has left scientists perplexed. Some believe the virus originated in animals, while others believe it originated in the Wuhan lab. At some point, one or more humans became infected as a result of an animal or laboratory leakage, and those infected humans may have passed on the original or mutated viral version to other humans (1). It can also be transmitted through contact with virus-infected hands or surfaces, as well as

touching the body opening with contaminated hands (2,3). Coronaviruses (CoV) are a type of virus that causes illnesses ranging in severity from mild to severe. nCoV is a novel variant that has never been identified in humans (4). The virus was dubbed the "COVID-19 virus" later on. The novel virus was discovered in December 2019 in Wuhan, China; an immediate lockdown in Wuhan and other surrounding cities failed to contain the outbreak, allowing it to spread to other parts of the world (5,6).

The World Health Organization (WHO) declared an international Public Health Emergency on pandemics on January 30, 2020 (7). Several strains of the virus have been discovered, the most notable of which are the delta and Omicron variants (5). COVID- The 19 symptoms range from minor to fatal. According to research, older people are more likely to suffer from virus complications (6,7).

There is great concern and research being conducted on the various pandemic waves. This could be due to weather patterns and predictable mutation (8-10). There is a need to investigate these cases by country and region to determine the infectious and spreadability of the various variants. Various studies have been conducted on the demographics, nature, and strength of the virus, and analyzing periodic data over time is also important in managing the trend (11-15). This study aims to provide an update report on the global distribution and implications of the Covid -19 pandemic from January 28<sup>th</sup> to February 3<sup>rd</sup>, 2022.

## Materials and Methods

### Study Area

Data from the United Nations Geoscheme and WHO were obtained from the 28<sup>th</sup> of January to the 3<sup>rd</sup> of February 2022 (WHO 2021). These days' data were chosen to provide updated information and to extend previous research.

### Methodology

One hundred and ninety-six (196) nations from various continents and regions of the world were chosen for this study. Data were obtained from the United Nations Geoscheme and WHO from the 28<sup>th</sup> of January to the 3<sup>rd</sup> of February 2022. (16). The data obtained for these countries (over 7 days per 100,000 people) were analyzed and directly compared with the values obtained for the United States. The United States was used as a Comparison Factor (CF) or Oyepata Factor (OF) because it has one of the best health systems in the world as well as the highest COVID-19 cases with a relatively large population.

### Statistical analysis

In this work, markers such as cumulative cases and cumulative deaths per 1,000,000 population were compared to that of the United States. To compare the proportions of all variables, bivariate analysis and the Chi-square test were used. Country observations are scaled to represent a comparison of two countries that are otherwise comparable.

## Results

When available data was compared to that of the United States, the American continent had a higher mortality comparison factor than infection cases, whereas the European continents had a higher infectious comparison value than mortality value. With the exception of South Africa and Botswana, the African continents have a low mortality and infectivity rate when compared to the rest of the world (Table 1, Figure 1, and Figure 2).

## Discussion

The pandemic has disrupted almost every aspect of human life, and if not properly understood, it may have severe and long-term consequences in some parts of the world. According to the data analysis, the American continent had a higher mortality comparison factor to infection cases, whereas the European continents had a higher infectious comparison value than a mortality value. Possible explanations include underreporting of cases and mortality, systematic errors in diagnosis and certification of cause of death due to a lack of tests, population structure differences, COVID-19 vaccination rates, comorbidity prevalence differences, and so on. With the exception of South Africa and Botswana, African continents have an unrivaled value of mortality and infectivity when compared to the rest of the world. Recently, there has been a new mutated strain of the virus from the original strain, with many possible strains unfortunately expected to continue reshaping our understanding of the situation (17,18). This has placed unprecedented strain on public health, food, and the global workforce. Several variants have been identified in several countries, and if not properly handled, it could result in thousands to millions of deaths (19,20).

Several infectious diseases, including dengue fever, smallpox, measles, chickenpox, Ebola, and polio, are known to thrive in Africa (21,22). In many cases, vaccination against some of these infections has been developed, or the body's immune system has successfully discovered a way to defend against these pathogens (23-26). This may have provided protection against exposure to the same or a related organism. The virus is likely to have spread quickly across African populations in a short period of time, exposing a large proportion to the virus without causing obvious symptoms and possibly even recovering.

**Table 1:** Cases and deaths of COVID-19 in 7 days from January 28<sup>th</sup> to February 3<sup>rd</sup>, 2022

S/N	Country,	Cases in 7 days (A)	Deaths in 7 days (B)	Population	CIL7DPM	DIL7DPM	D/13460	E/48.76
	Other				D	E	F	G
1	USA	4,516,322	16,302	334,077,703	13460	48.76	1.00	1.00
2	France	2,223,231	1,821	65,502,366	39132	28.26	2.91	0.58
3	India	2,183,875	3,928	1,401,494,922	1558	2.80	0.12	0.06
4	Brazil	1,118,521	2,323	214,953,059	5204	10.81	0.39	0.22
5	Germany	816,069	1,089	84,208,414	9691	12.93	0.72	0.27
6	Italy	1,140,783	2,456	60,320,945	18912	40.72	1.41	0.84
7	Russia	375,597	4,770	146,033,616	2572	32.66	0.19	0.67
8	UK	677,921	1,854	68,450,986	9904	27.09	0.74	0.56
9	Spain	876,792	1,099	46,783,474	18741	23.49	1.39	0.48
10	Turkey	498,736	1,222	85,776,474	5814	14.25	0.43	0.29
11	Netherlands	365,763	61	17,194,945	21272	3.55	1.58	0.07
12	Japan	313,639	89	125,862,915	2492	0.71	0.19	0.01
13	Israel	501,868	116	9,326,000	53814	12.44	4.00	0.26
14	Argentina	723,215	1,283	45,852,707	15773	27.98	1.17	0.57
15	Portugal	361,620	281	10,149,596	35629	27.69	2.65	0.57
16	Poland	241,224	1,410	37,780,927	6385	37.32	0.47	0.77
17	Belgium	346,692	174	11,669,537	29709	14.91	2.21	0.31
18	Australia	413,858	449	25,968,473	15937	17.29	1.18	0.35

19	Denmark	272,811	116	5,824,520	46838	19.92	3.48	0.41
20	Mexico	300,352	1,832	131,078,326	2291	13.98	0.17	0.29
21	Czechia	169,675	150	10,740,461	15798	13.97	1.17	0.29
22	Peru	352,532	942	33,699,175	10461	27.95	0.78	0.57
23	Austria	174,606	77	9,087,812	19213	8.47	1.43	0.17
24	Switzerland	243,850	97	8,754,887	27853	11.08	2.07	0.23
25	Sweden	273,427	178	10,199,030	26809	17.45	1.99	0.36
26	Romania	120,590	295	19,034,321	6335	15.50	0.47	0.32
27	Ukraine	121,400	894	43,317,391	2803	20.64	0.21	0.42
28	Chile	108,231	116	19,376,133	5586	5.99	0.41	0.12
29	Iran	39,710	161	85,695,494	463	1.88	0.03	0.04
30	Norway	126,776	27	5,488,393	23099	4.92	1.72	0.10
31	Greece	126,867	655	10,342,374	12267	63.33	0.91	1.30
32	Georgia	68,290	262	3,977,033	17171	65.88	1.28	1.35
33	Colombia	183,993	1,469	51,741,894	3556	28.39	0.26	0.58
34	Serbia	112,649	216	8,681,600	12976	24.88	0.96	0.51
35	S. Korea	49,877	210	51,339,099	972	4.09	0.07	0.08
36	Hungary	96,018	417	9,621,480	9980	43.34	0.74	0.89
37	Philippines	188,837	636	111,890,761	1688	5.68	0.13	0.12
38	Canada	140,678	1,141	38,266,342	3676	29.82	0.27	0.61
39	Vietnam	110,186	1,038	98,725,892	1116	10.51	0.08	0.22
40	Slovenia	77,824	83	2,079,391	37426	39.92	2.78	0.82
41	Bangladesh	83,203	92	167,288,252	497	0.55	0.04	0.01

42	Slovakia	44,937	300	5,463,832	8224	54.91	0.61	1.13
43	Jordan	53,158	88	10,363,573	5129	8.49	0.38	0.17
44	Indonesia	20,400	64	278,104,745	73	0.23	0.01	0.00
45	Lithuania	43,015	99	2,662,093	16158	37.19	1.20	0.76
46	Kazakhstan	95,567	66	19,132,410	4995	3.45	0.37	0.07
47	Uruguay	78,333	86	3,492,804	22427	24.62	1.67	0.50
48	Bulgaria	61,891	531	6,865,554	9015	77.34	0.67	1.59
49	Croatia	60,982	290	4,065,148	15001	71.34	1.11	1.46
50	Thailand	53,546	101	70,077,492	764	1.44	0.06	0.03
51	Latvia	36,531	72	1,853,150	19713	38.85	1.46	0.80
52	Lebanon	40,273	101	6,777,009	5943	14.90	0.44	0.31
53	Tunisia	62,092	184	12,014,494	5168	15.31	0.38	0.31
54	Iraq	42,420	47	41,650,829	1018	1.13	0.08	0.02
55	Pakistan	47,631	93	227,681,484	209	0.41	0.02	0.01
56	Panama	67,536	83	4,422,310	15272	18.77	1.13	0.38
57	Réunion	46,914	38	905,434	51814	41.97	3.85	0.86
58	Bahrain	24,599	1	1,795,081	13704	0.56	1.02	0.01
59	Kuwait	33,069	9	4,370,577	7566	2.06	0.56	0.04
60	Estonia	30,107	26	1,327,949	22672	19.58	1.68	0.40
61	Paraguay	38,457	188	7,271,292	5289	25.86	0.39	0.53
62	Ecuador	52,763	125	18,067,256	2920	6.92	0.22	0.14
63	Costa Rica	35,732	67	5,167,802	6914	12.96	0.51	0.27

64	Palestine	14,610	41	5,289,066	2762	7.75	0.21	0.16
65	Finland	57,026	91	5,554,358	10267	16.38	0.76	0.34
66	Singapore	22,146	7	5,923,229	3739	1.18	0.28	0.02
67	Malaysia	26,291	100	33,022,719	796	3.03	0.06	0.06
68	Bolivia	57,191	380	11,925,171	4796	31.87	0.36	0.65
69	Ireland	38,081	52	5,025,145	7578	10.35	0.56	0.21
70	Nepal	59,665	43	29,966,412	1991	1.43	0.15	0.03
71	Saudi Arabia	34,925	14	35,672,322	979	0.39	0.07	0.01
72	Morocco	47,939	189	37,603,446	1275	5.03	0.09	0.10
73	Moldova	23,946	104	4,019,106	5958	25.88	0.44	0.53
74	Azerbaijan	9,941	91	10,283,940	967	8.85	0.07	0.18
75	Libya	11,881	87	7,019,256	1693	12.39	0.13	0.25
76	South Africa	21,310	846	60,492,914	352	13.99	0.03	0.29
77	Guatemala	17,103	94	18,440,180	927	5.10	0.07	0.10
78	Maldives	16,182	6	555,616	29124	10.80	2.16	0.22
79	Cuba	22,534	28	11,315,661	1991	2.47	0.15	0.05
80	Cyprus	11,032	24	1,221,282	9033	19.65	0.67	0.40
81	Armenia	5,586	10	2,972,019	1880	3.36	0.14	0.07
82	UAE	19,803	26	10,079,655	1965	2.58	0.15	0.05
83	Oman	11,311	8	5,312,100	2129	1.51	0.16	0.03
84	Belarus	12,109	109	9,444,398	1282	11.54	0.10	0.24
85	Luxembourg	15,689	5	642,102	24434	7.79	1.82	0.16
86	Venezuela	14,394	27	28,308,265	508	0.95	0.04	0.02
87	Egypt	10,947	226	105,389,671	104	2.14	0.01	0.04
88	Mongolia	18,978	9	3,361,876	5645	2.68	0.42	0.05
89	Bosnia and Herzegovina	15,646	248	3,248,480	4816	76.34	0.36	1.57
90	Dominican Republic	33,870	22	11,020,216	3073	2.00	0.23	0.04
91	Algeria	13,847	81	45,104,553	307	1.80	0.02	0.04
92	Qatar	21,588	7	2,807,805	7689	2.49	0.57	0.05
93	North Macedonia	11,665	127	2,083,238	5599	60.96	0.42	1.25

94	Guadeloupe	20,806	9	400,232	51985	22.49	3.86	0.46
95	Martinique	11,620	13	374,804	31003	34.68	2.30	0.71
96	Iceland	10,151	1	344,751	29444	2.90	2.19	0.06
97	Albania	14,529	40	2,872,818	5057	13.92	0.38	0.29
98	Sri Lanka	5,947	99	21,555,499	276	4.59	0.02	0.09
99	Uzbekistan	9,129	23	34,237,280	267	0.67	0.02	0.01
100	Botswana	6,017	31	2,426,780	2479	12.77	0.18	0.26
101	Montenegro	8,341	45	628,192	13278	71.63	0.99	1.47
102	New Caledonia	2,469	1	289,845	8518	3.45	0.63	0.07
103	El Salvador	4,768	25	6,538,056	729	3.82	0.05	0.08
104	Faeroe Islands	4,465	2	49,157	90831	40.69	6.75	0.83
105	Trinidad and Tobago	5,384	111	1,406,668	3827	78.91	0.28	1.62
106	Barbados	4,246	6	287,933	14746	20.84	1.10	0.43
107	Belize	5,148	11	409,055	12585	26.89	0.94	0.55
108	Laos	4,787	29	7,442,735	643	3.90	0.05	0.08
109	Afghanistan	1,288	13	40,315,711	32	0.32	0.00	0.01
110	Jamaica	6,450	58	2,981,645	2163	19.45	0.16	0.40
111	Zambia	4,537	32	19,198,341	236	1.67	0.02	0.03
112	Channel Islands	2,384	5	176,401	13515	28.34	1.00	0.58
113	Suriname	5,655	26	594,958	9505	43.70	0.71	0.90

114	Seychelles	1,521	3	99,312	15315	30.21	1.14	0.62
115	Cameroon	4,447	14	27,591,338	161	0.51	0.01	0.01
116	Ethiopia	3,561	96	119,469,104	30	0.80	0.00	0.02
117	Sudan	3,488	21	45,469,298	77	0.46	0.01	0.01
118	Guyana	4,594	47	792,565	5796	59.30	0.43	1.22
119	Kyrgyzstan	4,944	18	6,694,613	739	2.69	0.05	0.06
120	Cayman Islands	0	0	66,944	0	0.00	0.00	0.00
121	Myanmar	975	5	54,987,647	18	0.09	0.00	0.00
122	Madagascar	1,548	54	28,817,252	54	1.87	0.00	0.04
123	Malta	2,017	27	443,406	4549	60.89	0.34	1.25
124	Honduras	5,020	32	10,154,024	494	3.15	0.04	0.06
125	French Guiana	4,080	11	310,930	13122	35.38	0.97	0.73
126	Andorra	4,813	3	77,461	62134	38.73	4.62	0.79
127	Bhutan	781	0	785,065	995	0.00	0.07	0.00
128	Solomon Islands	619	2	713,535	868	2.80	0.06	0.06
129	Uganda	1,778	60	48,025,301	37	1.25	0.00	0.03
130	San Marino	1,147	5	34,044	33692	146.87	2.50	3.01
131	Zimbabwe	1,889	50	15,205,526	124	3.29	0.01	0.07
132	Mozambique	2,651	25	32,640,542	81	0.77	0.01	0.02



133	Palau	590	0	18,231	32362	0.00	2.40	0.00
134	Saint Lucia	2,301	12	184,957	12441	64.88	0.92	1.33
135	Gibraltar	1,053	0	33,675	31269	0.00	2.32	0.00
136	Kenya	2,335	58	55,645,701	42	1.04	0.00	0.02
137	Curaçao	1,956	14	165,156	11843	84.77	0.88	1.74
138	New Zealand	517	0	5,002,100	103	0.00	0.01	0.00
139	Mauritius	552	0	1,275,112	433	0.00	0.03	0.00
140	Liechtenstein	831	0	38,301	21697	0.00	1.61	0.00
141	Ghana	1,893	29	32,099,491	59	0.90	0.00	0.02
142	Grenada	1,478	1	113,349	13039	8.82	0.97	0.18
143	Hong Kong	453	0	7,593,331	60	0.00	0.00	0.00
144	Greenland	1,238	1	56,926	21748	17.57	1.62	0.36
145	Fiji	1,919	33	906,736	2116	36.39	0.16	0.75
146	Haiti	742	3	11,622,670	64	0.26	0.00	0.01
147	Gabon	793	1	2,308,835	343	0.43	0.03	0.01
148	Monaco	847	0	39,683	21344	0.00	1.59	0.00
149	Nigeria	1,337	17	214,223,246	6	0.08	0.00	0.00
150	Dominica	770	3	72,269	10655	41.51	0.79	0.85
151	Mauritania	1,790	23	4,843,004	370	4.75	0.03	0.10
152	Angola	3,319	21	34,483,018	96	0.61	0.01	0.01
153	DRC	1,776	0	93,867,492	19	0.00	0.00	0.00

154	Antigua and Barbuda	677	1	99,213	6824	10.08	0.51	0.21
155	Senegal	1,279	21	17,441,958	73	1.20	0.01	0.02
156	Papua New Guinea	124	1	9,215,300	13	0.11	0.00	0.00
157	Aruba	1,186	7	107,484	11034	65.13	0.82	1.34
158	Malawi	1,038	54	19,911,995	52	2.71	0.00	0.06
159	Rwanda	2,245	20	13,460,207	167	1.49	0.01	0.03
160	Isle of Man	682	0	85,746	7954	0.00	0.59	0.00
161	Kiribati	42	0	122,351	343	0.00	0.03	0.00
162	Bermuda	1,118	4	61,913	18058	64.61	1.34	1.32
163	Namibia	764	91	2,613,749	292	34.82	0.02	0.71
164	Caribbean Netherlands	854	1	26,609	32094	37.58	2.38	0.77
165	French Polynesia	519	0	283,481	1831	0.00	0.14	0.00
166	Taiwan	460	0	23,885,078	19	0.00	0.00	0.00
167	China	447	0	1,448,129,940	0	0.00	0.00	0.00
168	Ivory Coast	928	19	27,411,758	34	0.69	0.00	0.01
169	Syria	291	21	18,173,320	16	1.16	0.00	0.02
170	Mayotte	1,063	1	283,230	3753	3.53	0.28	0.07
171	Burundi	388	0	12,450,875	31	0.00	0.00	0.00
172	Bahamas	1,133	12	399,196	2838	30.06	0.21	0.62

173	Brunei	191	0	444,114	430	0.00	0.03	0.00
174	Tanzania	1,525	33	62,425,392	24	0.53	0.00	0.01
175	Cambodia	247	0	17,085,369	14	0.00	0.00	0.00
176	Saint Pierre Miquelon	242	0	5,749	42094	0.00	3.13	0.00
177	Turks and Caicos	375	4	39,546	9483	101.15	0.70	2.07
178	Eritrea	305	6	3,624,146	84	1.66	0.01	0.03
179	Lesotho	233	2	2,169,151	107	0.92	0.01	0.02
180	St. Barth	355	0	9,925	35768	0.00	2.66	0.00
181	Saint Kitts and Nevis	277	4	53,795	5149	74.36	0.38	1.52
182	Benin	273	1	12,625,546	22	0.08	0.00	0.00
183	Togo	316	4	8,585,747	37	0.47	0.00	0.01
184	Burkina Faso	224	0	21,809,963	10	0.00	0.00	0.00
185	Guinea- Bissau	344	1	2,041,601	168	0.49	0.01	0.01
186	Djibouti	283	0	1,010,751	280	0.00	0.02	0.00
187	Tajikistan	134	0	9,876,647	14	0.00	0.00	0.00
188	Equatorial Guinea	240	3	1,475,866	163	2.03	0.01	0.04
189	Chad	186	5	17,171,372	11	0.29	0.00	0.01
190	Liberia	122	2	5,245,781	23	0.38	0.00	0.01

191	St. Vincent Grenadines	58	4	111,498	520	35.88	0.04	0.74
192	Comoros	43	0	898,918	48	0.00	0.00	0.00
193	Sierra Leone	49	0	8,233,735	6	0.00	0.00	0.00
194	Somalia	1,127	0	16,594,596	68	0.00	0.01	0.00

CIL7DPM = Cases in the last 7 days/1M population

DIL7DPM = death in the last 7 days/1M population

Data used were obtained from WHO/World meters as of 18<sup>th</sup>, January 2022

Figures obtained for the USA were used in determining the comparison factor (CF) or Oyepata Factor which is a ratio of the 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 the case/incidence and mortality index.

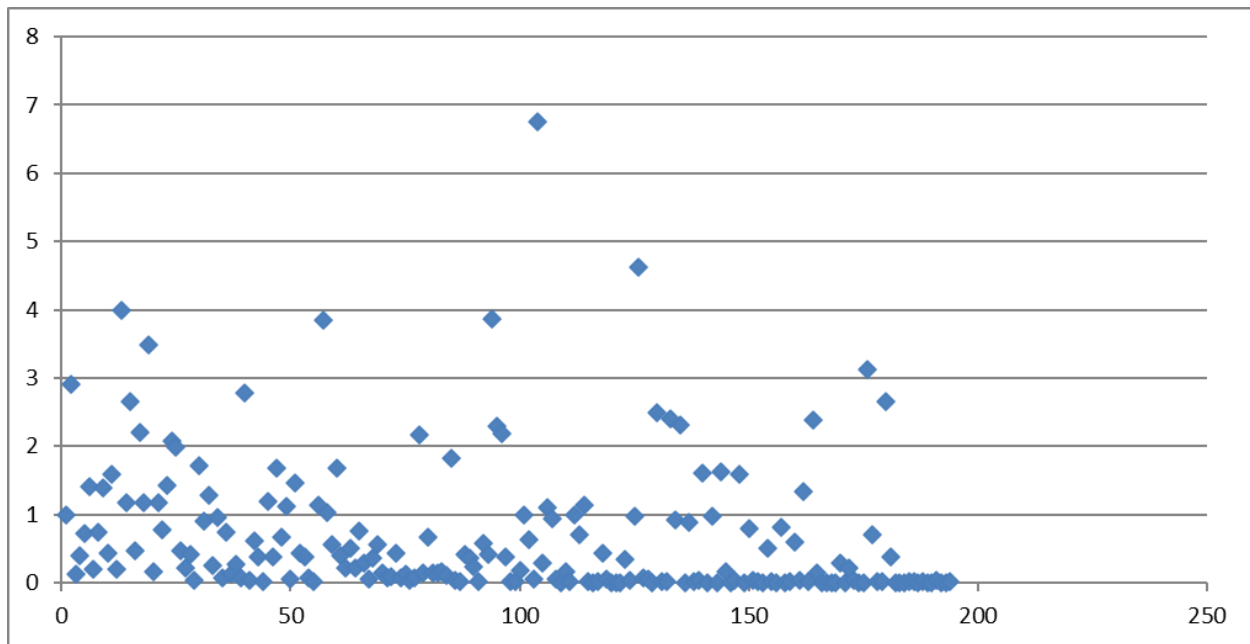
Factor of more than 1 = very high infection and mortality index

Factor of approximately 1 = high infection and mortality index

Factor of  $\leq 1$  but  $\geq 0.5$  = moderately high infection and mortality index

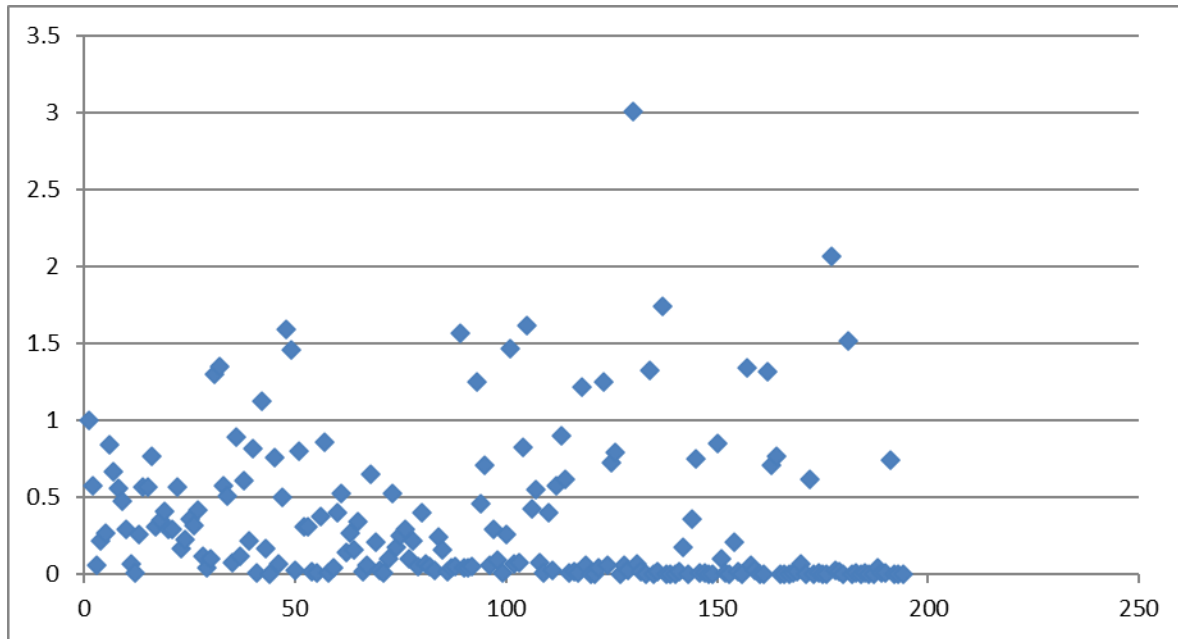
Factor of  $\leq 0.5$  but  $\geq 0.1$  = low infection and mortality index

Factor of  $< 0.1$  = very low infection, mortality, and recovery index (17)



**Figure 1.** Comparison factor per country relative to USA19<sup>th</sup> to 25<sup>th</sup> of January 18, 2022.

The X-axis represents the Comparison (Oyepata) factor, Y-axis represents countries



**Figure 2.** Death Oyezata factor caused by COVID-19 for each country relative to the USA as at 19<sup>th</sup> to 25<sup>th</sup>, January 2022.

The X-axis represents the Comparison (Oyezata) factor, Y-axis represents countries

The new variant of COVID-19 appears to have more infectivity and higher reports of mortality on the American continent. At all stages, Africa has been the least affected by all variants. Furthermore, when compared to the American continents, most European countries have a lower mortality ratio. These findings are intriguing when compared to previous research on the virus's cumulative effect (27-29). Africans appear unaffected by this ostensibly uncontrollable and lethal unleash. Apart from having fewer cases of the infection, Africans have shown the potential to have much lower mortality even when the infection is present (30-32). This suggests that the African body system has evolved a more progressive, robust, and faster immune response over time, reducing the likelihood of the virus causing disease-related health complications. Though the mortality rate remained higher than in other Western countries, the United States has made remarkable strides in preventing and reducing cases of infection when compared to several other countries that suffered the same fate from the virus. According to available data, Africa, which is

generally classified as third world or underdeveloped, does not suffer from severe medical consequences of the infection, and when infected, they tend to recover faster with a lower risk of complications and mortality.

As previously stated, Africans live in communities and dense clusters, in contrast to most western countries, which exist in a solitary system (33,34). As a result, most people in Africa are likely to have been exposed to the virus without knowing it or developing major symptoms. Several observers around the world have speculated that Africa may become a graveyard as a result of this. Many analysts around the world have been perplexed by the reasons for this fortunately unexpected result. According to studies, African children's immune systems develop faster and more robustly than Dutch children's due to poor health and environment (35,36). Childhood Exposure to the pathogenic organism may have boosted the immune system and protected children from developing certain allergies and infectious diseases later in life, when they were exposed to a

similar allergen or pathogen (37,38). This viewpoint is backed up by data and comparison factors obtained from Haiti. Haiti is currently the poorest country in Latin America and the Caribbean region, and one of the world's least developed countries (39,40,41). They have one of the lowest rates of infection and mortality, resulting in little to no statistical significance of the comparison factor. Thus, in poor countries, childhood or early exposure to some diseases may have encouraged a more robust immune response to the same or related infection. As a result, several African countries are vulnerable as well as potentially more defensive against the COVID-19.

### Significance of the Study

The study discovered that America and Europe, two of the world's most developed continents, are still the most affected by the pandemic. Contrary to popular belief, Africa has shown little evidence of being affected by the pandemic. This could be due to environmental exposure or vaccination against related microorganisms, which could have resulted in some kind of biological immunity that is now beneficial against future exposure. The study also revealed that Africa, like every other continent, requires vaccines but that they are not in particularly high demand.

### Conclusion

Many underdeveloped countries, particularly Africans and Haitians, have survived the virus's onslaught. While there appears to be conflicting views on how to best deal with the virus, the virus and its innumerable variants suggest that understanding and utilizing Africa's biological and inherent survival mechanisms may be the best way to regain near-normal freedom.

### Authors' contributions

Simeon, J.O. and Tosin, J.O. were involved in the collection of data and the development of an analysis model. Simeon, J.O., Joseph SO, Tosin, J.O. and Zubairu, S.A. were responsible for the analysis and writing of this manuscript.

### 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.

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