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Research Article

Update Report on Progress of Covid -19 Pandemic from 19th-25th January, 2022 across Different Countries of the World

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Abstract

Background: COVID-19 has set the globe on a difficult path. While several successes have been achieved, there are still many yet to be understood. This study provides an updated report on the progress of Covid -19 pandemic from 19th-25th January, 2022 across different countries of the world updated.

Material And Method: Data from one hundred and ninety-six (196) countries and regions of the world were gotten from United Nations Geo scheme. Results were collected and subsequently compared to the values obtained for the USA.

Result: Comparing available data with that of the USA, American continent had higher mortality comparism factor than infection cases, while European continents had higher infectious comparism value than mortality value. African continents, with exception of South Africa and Botswana, seems unbothered in value of mortality and infectivity.

Conclusion: The new wave and virus variant have caused a renewed surge in its global consequence. There is the need to understand how Africa has survive all variant of the virus with minimal medical facilities.

Key words: Africa; America; continent; covid-19; Europe; Nigeria; USA

Introduction

Scientists are still puzzled by the outbreak. Some believed that the virus began in animals while others think it's from Wuhan lab. At some point, one or more humans acquired an infection from an animal or laboratory leakage to affect humans, and those infected humans may have transmitted the original or mutated viral version to other humans [1–4]. It can also be transmitted through contact with hands or surfaces that have been previously exposed by the virus and touch the body opening with the contaminated hands s [5–8]. Coronaviruses (CoV) is among the family of viruses that cause illness ranging from less severe to more severe diseases. CoV is a new variant that has not been previously identified in humans [9–15]. The new virus was subsequently named the "COVID-19 virus. The novel virus was first identified in Wuhan, a city in China, in December of 2019 [16–19]; an immediate lockdown in Wuhan and other surrounding cities failed to contain the outbreak, resulting its spread to different parts of the word [16–19]. On 30 January 2020, the World Health Organization (WHO) declared an international Public Health Emergency on the pandemic s [20–24]. Different strain of the virus has been discovered, the most notable of which are the delta and the Omicron variants (19-21). COVID-19 symptoms range from simple to life-threatening. Studies have shown that older persons are more likely to suffer from complications of the virus [24–29]. There is serious concern and study on the different waves caused by the pandemic. This may be due to weather conditions and predictable mutation [30–35]. There is a need to study these cases per country and region with respect to the infectious and spreading ability of the various variants. Different work has been done on the demographics, nature and strength of the virus, and analyzing the periodic information per time was also predicated in managing the trend [36–40]. The aim of this study was to provide update report on progress of Covid -19 pandemic from 19th-25th January, 2022 across different countries of the world.

Material and Method:

Study Area: Data from December 07 to December 13, 2021 were obtained from United Nations Geo scheme and WHO (WHO 2021).

Methodology

One hundred and ninety-six (196) nations from different continents and regions of the world were selected for this study. Data used where obtained from 19th to 25th of January, 2022 from United Nations Geo scheme and WHO [41]. 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 systems and also has the highest COVID-19 cases with a relatively large population in the world.

S/N	Country Other	Cases in 7 days (A)	Deaths in 7 days (B)	Population	CIL7DPM D	DIL7DPM E	D/13460 F	E/48.76 G
1	USA	4,496,822	16,289	334,077,703	13460	48.76	1.00	1.00
2	France	2,563,251	1,851	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
2ws1	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

Table 1: The cases and death of COVID-19

Statistical Analysis

In this work markers as cumulative cases and cumulative cases of death per 1,000,000 population were analyzed against that of the USA. Bivariate analysis and Chi-square test was used to compare the proportions of all variables. Country observations are scaled to represent a comparison of two countries similar in all other respects.

Results

Comparing available data with that of the USA, American continent had higher mortality comparism factor than infection cases, while European continents had a higher infectious comparism value than mortality value. African continents, with exception of South Africa and Botswana, have an unbothered value of mortality and infectivity when compared to the rest of the world (Table 1).

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

Key:

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 meter's as at 18th, January, 2022

CF = Comparism Factor

OF= Oyepata Factor

Fig. 1 and 2 obtained for USA were used in determining 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.

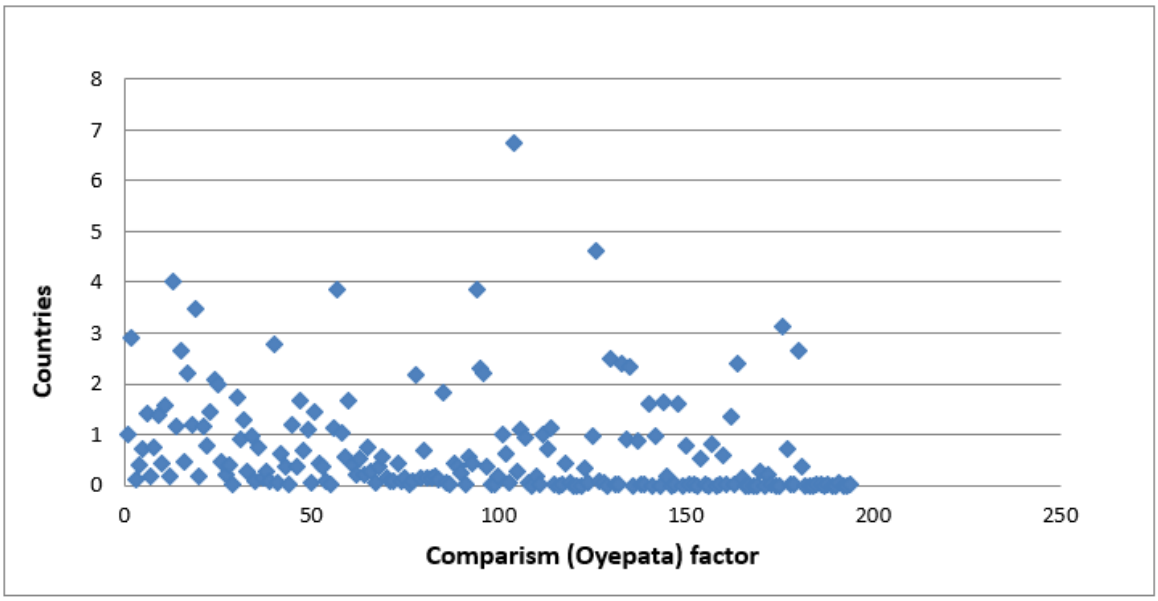

Figure 1: graph showing Comparism factor per country relative to USA19th to 25th of January 18, 2022.

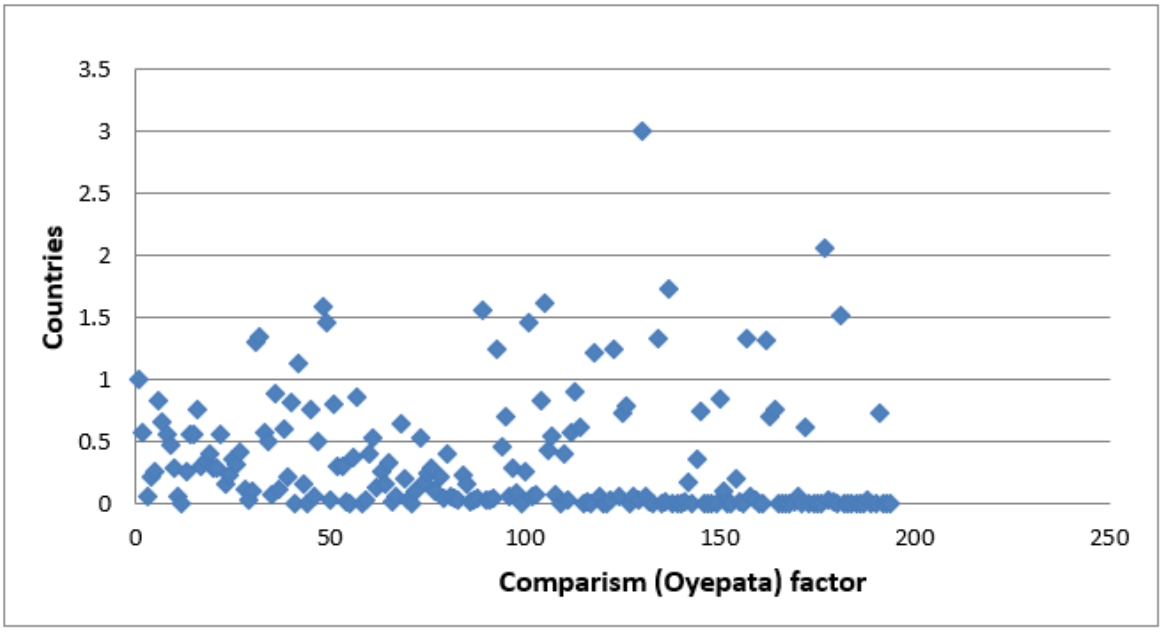

Figure 2: graph showing death Oyepata factor caused by Covid-19 for each country relative to USA as at 19th to 25th, January, 2022. X-axis represent Comparism (Oyepata) factor, Y-axis represent countries

Discussion

From analyzed data, American continent had higher mortality comparism factor to infection cases, while European continents had higher infectious comparism value than mortality value. African continents, with exception of South Africa and Botswana, has an unbothered value of mortality and infectivity when compared to the rest of the world. Recently, there has been new mutated strain of the virus from the original strain, with many possible strains unfortunately expected to keep reshaping our understanding of the situation [42–46]. This has caused unprecedented burden to public health, food and world workforce. Various variant has been identified in several countries, and it could potentially affect thousands to millions of deaths if not properly handled [47–49]. 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 [50–53]. 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 pathogen [54–58]. 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 manifesting obvious symptoms and may have even recovered. 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 [59–65]. Africans appear to be unaffected from this seemly uncontrollable and lethal unleash. Apart from fewer cases of the infection, Africans have shown potential to have much lesser mortality even when compared to case of the infection [65–66]. This suggested that Africans body

system have 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, African slives as a community and in dense clusters which is obviously different to most western countries that exist in solitary system [67,67]. 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 has puzzled many analysts around the world. Studies have shown, that because of poor health and environment, the immune systems of African children tend to develop faster and more robust compared to Dutch children [69]. 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 [70]. 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 [71–72]. 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 countries be both vulnerable and potentially more defensive against the coronavirus.

Conclusion

Many underdeveloped countries, particularly Africans and Haiti, have developed an unexpected survival mechanism. While there appears to be a conflicting approach on how best to manage and live with the virus, the virus and its apparently unending variants suggests that understanding and utilizing Africans biological survival mechanism may be the best way to regain near normal freedom.

Significance of the Study

The study discovered that America and Europe, two of the most developed continents in the world are ironically still the most affected by the pandemic. Africa, against public expectation has shown little sign of been affected by the pandemic. This may be due to environmental exposure or vaccination against related microorganism, which may have resulted to some kind of biological immunity that became beneficial against subsequent exposure. The study also revealed that Africa, like every other continent need vaccine but not on a relatively desperate demand.

Authors' contributions

Joseph OS and Joseph OT were involved in the collection of data and development of model for analysis. Joseph OS, Joseph SO, Joseph OT and Sebastine AZ were responsible for analysis and writing of this manuscript.

Conflict of Interest

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

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Reference

1. 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.
2. Tretter, F; Peters, EMJ; Sturmberg, J; Bennett, J; Voit, E; et al. (28 September 2022). "Perspectives of (/memorandum for) systems thinking on COVID-19 pandemic and pathology". *Journal of Evaluation in Clinical Practice*. PMC 9538129. PMID 36168893. S2CID 252566067.
3. Zhang C, Wu Z, Li JW, Zhao H, Wang GQ (May 2020). "Cytokine release syndrome in severe COVID-19: interleukin-6 receptor antagonist tocilizumab may be the key to reduce mortality". *International Journal of Antimicrobial Agents.* 55 (5): 105954. PMC 7118634. PMID 32234467.
4. Gómez-Rial J, Rivero-Calle I, Salas A, Martinón-Torres F (2020). "Role of Monocytes/Macrophages in Covid-19 Pathogenesis: Implications for Therapy". *Infection and Drug Resistance.* 13: 2485–2493. PMC 7383015.PMID32801787.
5. Dai L, Gao GF (February 2021). "Viral targets for vaccines against COVID-19". *Nature Reviews. Immunology.* 21 (2): 73–82. ISSN 1474-1733. PMC 7747004. PMID 33340022.
6. Boopathi S, Poma AB, Kolandaivel P (April 2020). "Novel 2019 coronavirus structure, mechanism of action, antiviral drug promises and rule out against its treatment". *Journal of Biomolecular Structure & Dynamics*. 39 (9): 3409–3418. PMC 7196923. PMID 32306836.
7. Ojochegbe, A.B., Adejoh, D.P., Boniface, M.T., Duniya, S.V. and Iyaji, A. (2019) Activity of Methanol Extract of Leptadenia hastata Leaves in Alcohol-Induced Liver Injury. *American Journal of Biomedical Sciences & Research*, 4, 142-146
8. olomon, I.P, Oyebadejo, S.A., Ukpo E.M. and Joseph, O.S. (2015). Effect of Fresh Citrus limon Juice on Liver Histomorphology of Growing Rabbits (Oryctolagus cuniculus). *Scholars Journal of Agriculture and Veterinary Sciences*.2 (5):347-351.
9. Aprioku JS, Joseph OS, Obianime AW (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.
10. Okokon JE., Joseph OS. and Umoh EE. (2016). Nephroprotective activity of Homalium letestui stem extract against paracetamol induced kidney injury. *Journal of Experimental and Integrative Medicine*. Volume 6 (1): 38-43.
11. Okokon JE. O, Joseph OS. and Umoh EE. (2016). Hepatoprotective activity of Homalium letestui stem extract against paracetamol liver injury. *Avicenna Journal of Phytomedicine*. 13(4): 87 – 92.
12. Timothy S.Y., Wazis C.H., Midala T.A. S, Joseph O.S., Sabastine A.Z., et al. (2017). Evaluation of Anti-Diarrhoeal Activity of Different Bark Extracts of Faidherbia albida (Delile) A (Chav) in Albino Rats. Bima *Journal of Science and Technology* Vol. 1 (2). Pg. 122-130
13. Joseph O. S. and Joseph O. T. (2018). Hepatoprotective activity of ethanol stem extract of Homalium letestui against thioacetamide-induced liver injury. *The Nigerian Journal of Pharmacy*. Vol. 52 (1). Page 67-74.

14. 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.
15. Joseph O. S., Jude E.O and Joseph O. T. (2018). Effect of ethanol stem extract of homalium letestui on gentamicin-induced
16. kidney Injury in rat. Vol. 4(2). *Advanced Herbal Medicine*. Page 51-64.
17. Gómez-Rial J, Rivero-Calle I, Salas A, Martinón-Torres F (2020). "Role of Monocytes/Macrophages in Covid-19 Pathogenesis: Implications for Therapy". *Infection and Drug Resistance*. 13: 2485–2493. PMC 7383015. PMID 32801787
18. Oluwakanyesola A. S., Joseph O. S., Jacob A., Rebecca S. M. and Joseph O. T. (2018). Sub-acute haematological toxicity study of safi® blood purifier on wister rats. *The Nigerian Journal of Pharmacy*. Volume 52 (20).
19. osin JO, Wolfe OA, Iyeopu SM, Simeon JO, Chinwe Aet al. (2019). Clinical study on the effect of Moringa oleifera on serum level of glucose and tryglyceride in subjects taken tenofovir, lamivudine and efavirenz combination regimen. *European Scientific Journal*. Vol.15, (.21). Page 280 -293.
20. Simeon JO, Builders M, Haruna WC, Tosin JO, Zubairu SA, et al. (2019). Effect of administration ethanol leaf extract of terminalia chebula on liver of wister rat. *International Journal of Research and Scientific Innovation.* Volume VI (Issue VII). Page 91- 97.
21. Dai L, Gao GF (February 2021). "Viral targets for vaccines against COVID-19". Nature Reviews. *Immunology*. 21 (2): 73–82. PMID 33340022.
22. Boopathi S, Poma AB, Kolandaivel P (April 2020). "Novel 2019 coronavirus structure, mechanism of action, antiviral drug promises and rule out against its treatment*". Journal of Biomolecular Structure & Dynamics*. 39 (9): 3409–3418 PMC 7196923. PMID 32306836
23. Simeon JO, Modupe B, Haruna WC, Zubairu SA, Lubo MT, et al. (2019). Histological study of effect of ethanol stem extracts of Homalium letestui on thioacetamide - induced injury in albino rat, using various staining techniques. *International Journal of Research and Scientific Innovation*. Volume VI (Issue VII). Page 77 – 85.
24. Sabastine AZ, Musa TL, Joseph OS, Builders M, Joseph OT. (2019). Histological study of effect of ethanol stem extracts of Homalium letestui in paracetamol induced injury in albino rat, using various staining techniques. *American Journal of Biomedical Science & Research*. 4(2). Page 82 – 89
25. Joseph OS, Builders M, Joseph OT, Ariahu EC, Zubairu SA, et al.OP. (2019). Toxicity study of ethanol leaf extract of ocimum canum on heart and lipid profile of wister rats. *International Journal of Current Advanced Research*. Volume 8. (Issue 05). Page 18800 – 18803.
26. Samson AO, Joseph OS, Samson OA, Emem RA. (2019). Effect of Citrus Linton Juice and Tamoxifen on the oxidative activities of MCT-7 cell induced Bresat Cancer in Sprawgue Dawley Rats. *Saudi Journal of Biomedical Research*. Volume 8 (7). Page 76-92.
27. Simeon JS, Builders M, Deborah IR, Zubairu SA, Lubo MT, et al. (2019). Sub-Acute Toxicity Study of Ethanol Leaf Extract of Terminalia chebula On Brain, Stomach and Spleen of Wister Rats. *American Journal of Biomedical Science & Research*. 3(3). Page 277-282.
28. Joseph O.S., Builders M., Joseph O, T., Zubairu S. A., Musa T. (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
29. 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
30. 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.
31. Modupe IB, SOyepata SJ, Akpobome RV (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.
32. Builder MI, Anzaku SA, Joseph SO (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.
33. Joseph OS, Builders M, Joseph OT, Sabastine AZ, Musa Tl. (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.
34. Joseph OS, Builders M, Joseph OT, Sabastine AZ, MUSA TL et al. (2019). Sub-acute toxicity study of ethanol leaf extract of Ocimum canum onbrain, lungs, stomach and spleen of wister rats. *African Journal of Pharmaceutical Research & Development.* Vol. 11 No.1. Page 35-42.
35. Joseph O. S., Joseph O. T., Musa T. L and Oyepata P. J. (2019). Histological evaluation of the nephroprotective activity of the ethanol stem extracts of Homalium letestui in Gentamicin – induced albino rats' injury, using various staining techniques. *Global Scientific Journal*. Volume 7, Issue 8. Page 1065-1087.
36. Li Q, Guan X, Wu P, Wang X, Zhou L, et al. (March 2020). "Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia*". The New England Journal of Medicine*. 382 (13): 1199–1207.PMID 31995857
37. 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.
38. 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 7, Issue 10. Page 106-122.
39. Haruna WC, Simeon JO, Builders M, Tosin JO (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.

40. Haruna WC, Builders M, Simeon JO, Tosin JO (2020). Toxicological Study of the Effect of Ethanol Leaf Extract of Pterocarpus santalinus Extract on Liver of Wister Rats. *Nigeria biomedical Science Journal*. Page 17-29.
41. Wazis CH, Joseph OS, Modupe B, Joseph OP (2020). Effect of Ethanol Leaf Extract of Pterocarpussantalinus Extract on Kidney of Wister Rats. *Nigerian Biomedical Science Journal* Vol. 17 No 1. Page 35-47.
42. Builder M.I., Joseph S.O, Olugbemi T.O. and Akande, T (2020). Toxicity. Studies of extract of African Mistletoe: Agelanthus Dodoneifolius Polh and Wiens in Rats. *Nigeria biomedical Journal*. Page 113-130
43. Builders M. I., Joseph S.O., Bassi PU. (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.
44. Joseph O. S., Builders M., Joseph O. T. (2020). Effect of Caffeine on Diazepam - Induced Sedation and Hypnosis in Wister Rat. *Global Scientific Journal.* Vol. 8, Issue 9. Page 451-466
45. 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
46. Simeon JO., Lubo MT., Tosin JO., Irabor 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.
47. Builders MI, Simeon JO, Ogundeko TO, Builders P. (2020). Antimalarial Drugs and COVID -19. *Sumerianz Journal of Medical and Healthcare*. Vol. 3, No. 12, pp. 111-116.
48. Zubairu SA, Simeon JO, Tosin JO (2021). Effect of ethanol leaf extract of Terminalia chebula extracton kidney of wister rats. *Global scientific Journal.* Volume 9, Issue 2. Page 514-526.
49. Joseph OS, Builders M, Joseph O T, Famojuro TI, Ogira JO, et al. (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.
50. Joseph SO, Opeyemi JT. (2021). Effect of Clinical Study of Moringa oleifera on Body mass index, Low density lipoprotein and Triglyceride level in Patients on Tenofovir/lamivudine/efavirenz Combination Therapy. *Advanced Herbal Med.* Vol. 6. Issue 1. Page. 14-27
51. Zubairu SA, Festus OA, Simeon JO, Irabor I, et al. (2021). Effect of Anacardium occidentale Fruit Juice Extract on Haematological Parameters and Spleen of Paracetamol Induced Injury in Albino Rats. *Global Scientific Journal.* Volume 9, Issue 7. Page 1640-1654.
52. Sabastine AZ, Joseph OS, Joseph OS, Famojuro TI, Olorunfemi AF. (2021). Effect of Cashew apple juice (Anacardium occidentale L.) on Hematology and Spleen of Gentamicin Induced Injury in Albino Rats. *Global Scientific Journal*. Volume 9, Issue 7. Page 3686-3698.
53. 43.Tosin JO, Zubairu SA, Simeon JO. (2021). Clinical Effect of Moringa oleifera on Body Mass Index, Triglyceride and High-Density Lipoprotein in Subjects Taken Tenofovir Combination Regimen. *European Journal of Biology and Medical Science Research.* Vol.9, No.4, pp.6-19.
54. 44.Smeon JO, Zubairu SA, Tosin JO. (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.
55. 45.Simeon JO, Simeon JO, Zubairu SA, Adegbenga AD (2021). Concomitant administration of ethanol leaf extract of Thymus vulgaris on Diazepam– induced Sedation and Hypnosis in Wister Rat. *Journal of Nursing and Health Science*. Volume 16, Issue 5. PP 04-09.
56. 46.Simeon JO, Zubairu SA, Tosin JO (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.
57. 47.Oyepata JS. (2021). The Earth: A Lost Planet from another Universe. *International Journal of Multidisciplinary Research and Analysis*. Volume 04 Issue 12. Page 1795-1797
58. 48.Simeon JO, Tosin JO, Adegbenga AD. (2021). The Relative Global Consequences of Cumulative Distribution of Covid-19, Using the USA as Comparism Factor and Cumulative Covid -19 Data of 31st October 2021. *International Journal of Multidisciplinary Research and Analysis*. Page 1906 -1917.
59. 49.Weinstein AM (1994). "Mathematical models of tubular transport". *Annual Review of Physiology*. 56: 691–709. PMID 8010757
60. Joseph O.T., Joseph O. S., Chinwe A. F. (2021). Clinical Study on the Effect of Moringa oleifera on Body mass index, Serum Level of High-density lipoprotein and Triglyceride in Subjects TakenTenofovir, *Lamivudine and Efavirenz Combination Regimen. J* RNA Genom 2021 Volume S04 Issue 004. Page 1-6.
61. Zubairu SA, Simeon JO, Tosin JO (2022). Analysis and understanding the progress, trend and consequences of Covid -19pandemic over a seven days period across different countries of the world. *International Journal of Advances in Engineering and Management* (IJAEM). Volume 4, Issue 2 pp: 1588-1598.
62. Kalantar-Zadeh K, Jafar TH, Nitsch D, Neuen BL, Perkovic V (August 2021). "Chronic kidney disease" (PDF). Lancet. 398 (10302): 786–802.
63. Simeon JO, Tosin JO, Zubairu SA, Oyepata JS (2022). Studying the trend and progress on Covid-19 pandemic from 29th January to 4th of February 2022 across different countries of the world. *International Journal of Research and Innovation in Social Science* (IJRISS) |Volume VI, Issue II. Page 499-505.
64. Simeon JO, Tosin JO, Zubairu SA, Daniel MF. (2022). Toxicological evaluation of Lavandula stoechas on heart and blood of wistar rat. *International Journal of Advances in Engineering and Management* (IJAEM). Volume 4, Issue 4 Apr 2022, pp: 1233-1241.
65. Simeon JO, Zubairu SA, Tosin JO, Sunday SB. (2022). Update report and analysis on the global trends and progress of Covid -19 pandemic on 18th January, 2022 across different countries of the world. *International Journal of Research and Innovation in Applied Science* (IJRIAS) |Volume VII, Issue IV. Page 58 -66.

66. Novick AC, Gill IS, Klein EA, Rackley R, Ross JH, et al. (2006). "Operative Urology at the Cleveland Clinic". Urology Annals. Totowa, NJ: Humana Press. 8 (Suppl 2): S102–S108. ISBN 978-1-58829-081-6. PMC 4869439.
67. Joseph O. T., Olorunfemi A. F., Sabastine A. Z., Sebastine B. S., Joseph O. S. (2022). Understanding the cumulative distribution, implication and progress on Covid -19 pandemic as at 7th of February 2022 across different countries of the world: An update report. *International Journal of Research and Innovation in Social Science* (IJRISS) |Volume VI, Issue IV. Page 691-699.
68. Thomas SR (2005). "Modelling and simulation of the kidney". *Journal of Biological Physics and Chemistry*. 5 (2/3): 70–83
69. Simeon, J.O., Tosin, J.O., Zubairu, S.A. (2022). Cumulative evaluation of demography and distribution of COVID-19 around the globe: An update report of COVID-19 until 17th February 2022. *Int J Epidemiol Health* Sci;3(6): e34.
70. Oyepata JS, Simeon JO. (2022). The Earth: An Alien Planet in Another Universe. *Global Journal of Science Frontier Research*: A Physics and Space Science. Volume 22 Issue 1. Page 55-57.
71. Maton A, Hopkins J, McLaughlin CW, Johnson S, Warner MQ, et al. (1993). Human Biology and Health. Englewood Cliffs, New Jersey, USA: Prentice Hall. ISBN 978-0-13-981176-0.
72. Joseph O. S., Sabastine A. Z, Joseph O. T., Adegbuyi T. A. (2022). An Analysis of Daily distributive effect of COVID-19 Pandemic across the Globe Using the USA as a Comparism Factor: An update report of 17th of February, 2022.
73. Simeon JO, C Ariahu Emmanuel, Tosin JO, Zubairu SA. (2022). Virological and immunological consequences of Covid -19 pandemic distribution across different countries; A seven days update study. *International Journal of Advances in Engineering and Management* (IJAEM) Volume 4, Issue 8. pp: 871-883.
74. Kalantar-Zadeh K, McCullough PA, Agarwal SK, Beddhu S, Boaz M, et al. Tosin JO, Simeon JO. (2022). Mathematical and demographic understanding on the effect Covid 19 across the country of the world; An update report of cases and death from 2nd to 8th of August, 2022. *International Journal of Advances in Engineering and Management* (IJAEM) Volume 4, Issue 8. pp: 891-903.
75. Modupe BI, Simeon JO, Tosin JO. Toxicological study of ethanol extract of Lavandula stoechas on Liver of Wistar rat. (2022). *International Journal of Advances in Engineering and Management* (IJAEM) Volume 4, Issue 9. pp: 892-901.
76. Cotran RS, Kumar V, Fausto N, Robbins SL, Abbas AK (2005). Robbins and Cotran pathologic basis of disease. St. Louis, MO: Elsevier Saunders. ISBN 978-0-7216-0187-8.
77. Modupe BI, Simeon JO, Oyepata JS, Tosin JO. (2022). Update report on comparism and analysis on the progress made in cases and death of COVID-19: A seven days study. *International Journal of Advances in Engineering and Management* (IJAEM) Volume 4, Issue 9 Sep. 2022, pp: 902-915
78. Joseph Oyepata Simeon. (2022). UFOs and Human: Understanding the Relevance, Purpose andHumofunctional Implication. *International Journal of Research Publication and Reviews*, Vol 3, no 9, pp 1304-1308.
79. Builders Iretiola M, Joseph Oyepata S, Joseph Opeyemi T. (2022). Toxicological Study of Ethanol Extract of Lavandula Stoechas onKidney of Wistar Rat. *International Journal of Research Publication and Reviews*, Vol 3, no 9, pp1290-1298.
80. Joseph Oyepata Simeon, Joseph Opeyemi Tosin, Moses Femi Daniel, Ariahu Emmanuel C. (2022). COVID-19 Cases and Mortality Report Across Countries of the World, using USA as a Comparism Factor: An Update Report 18th to 24th ofAugust, 2022. *International Journal of Research Publication and Reviews*, Vol 3, no 9, pp 1262-1272.
81. Kalantar-Zadeh K, McCullough PA, Agarwal SK, Beddhu S, Boaz M, et al. (June 2021). "Nomenclature in nephrology: preserving 'renal' and 'nephro' in the glossary of kidney health and disease". *Journal of Nephrology*. 34 (3): 639–648. PMID 33713333.
82. Etuk IC, Udobang JA, Daniel AO, Ekong O, Okokon JE, et al. (2023). Effect of leaf extract and fractions of Solanum anomalum on oxidative stress markers, kidney function indices and histology of alloxan-induced diabetic rats. *Journal of Current Biomedical Research*.Vol 3. Page 783-799.

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