International Journal of Advances in Engineering and Management (IJAEM)
Volume 4, Issue 9 Sep. 2022, pp: 902-915 www.ijaem.net ISSN: 2395-5252

Update report on comparism and analysis on the progress made in cases and death of COVID-19: A seven days study.

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Date of Submission: 15-09-2022 Date of Acceptance: 24-09-2022

ABSTRACT

Background and Objective: COVID-19 pandemic and it's persistence resurgence have resulted in a loss of human life worldwide and presents an unprecedented challenge to public. Countries have suffered differently from the impact of the virus. Possible reasons have been suggested. This study is aimed to carry out an Update report on comparism and analysis on the progress made in cases and death of COVID-19: A seven days study of 2nd to 8th of Setember, 2022

Material and Method: Cumulative data from one hundred and fifty three (153) countries and regions of the world were collected from the United Nations geoscheme from 2nd to 8th of Setember, 2022. Results were collated and subsequently compared to the values obtained for the USA.

Result: Relatively, there was sustained level of reemergence of the virus in South and North America. There is a higher value of comparism factor in most Asia and European region when compared to that of the USA. European Countries like UK, Spain and Greece has higher death comparism factor than case comparism while the rest have higher case comparism factor. Africa is relatively unbothered when compare to the USA.

Conclusion: lots have been achieved in understanding and managing Covid-19 virus. There has been a resurgence in certain continent, but Africa has remain unaffected cases and death of the virus recorded.

Keywords: Africa, America, continent, COVID-19, Europe, Nigeria, USA

I. INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus[1-4]

Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. However, some will become seriously ill and require medical attention[5-9]. The virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. These particles range from larger respiratory droplets to smaller aerosols[10-13]. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty[14-17]. At some point, one or more humans acquired infection from an animal or laboratory leakage to affect humans, and those infected humans may have transmitted the original or mutated[18]. It can also be transmitted through contact with hands or surfaces that have been previously exposed by the virus and touch thebody opening with the contaminated hands[19-20]. Coronaviruses (CoV) is among the family of viruses that cause illnesses ranging from less severe to more severe diseases. nCoV is a new variant that has not been previously identified in humans[21,22]. 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; an immediate lockdown in Wuhan and other surrounding cities failed to contain the outbreak, resulting in its spread to different parts of

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the word[23-26]. On 30 January 2020, The World Health Organization (WHO) declared an international Public Health Emergency on pandemics[27] different strains of the virus have been discovered, most notable of which are the delta and the Omicron variants[28]. 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[29-30].

There is serious concern and study on the different waves caused by the pandemic. This may be due to weather conditions and predictable mutation[31-33]. There is the need to study these cases per country and region for 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 periodic information per time is also predicated in managing the trend[34-38]. This study is aimed to carry out an Update report on comparism and analysis on the progress made in cases and death of COVID-19: A seven days study of 2nd to 8th of Setember, 2022.

II. MATERIAL AND METHOD

Study Area: Cumulative data from 2nd to 8th of September, 2022 were obtained from United Nations Geoscheme and WHO (WHO 2021).

Methodology

One hundred and fifty three (153) nationsfrom different continents and regions of the the world was selected for this study. Data used were obtained from 2nd to 8th of September, 2022 from United Nations Geoscheme and WHO [19]. The Data obtained for these countriesover 7 days per 100000 populations, were analyzed and compared directlywith the values gotten for the USA. USA was used as a Comparison 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.

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 was used and a Chi-square test, to compare proportions of all variables. Country observations are scaled to represent a comparison of two countries similar in all other respects.

Table 1: cases and death of COVID-19

S/N	Country, Other	Cases in the last 7 days	Cases in the last 7 days/1M pop	Deaths in the last 7 days	Deaths in the last 7 days/1M pop	CPM/1198	DPM/5
1	USA	401,572	1198	1,769	5	1.00	1.00
2	S. Korea	536,663	10,448	437	9	8.72	1.80
3	Russia	329,459	2,255	628	4	1.88	0.80
4	Taiwan	237,903	9,950	220	9	8.31	1.80
5	Germany	203,601	2,413	575	7	2.01	1.40
6	Italy	116,357	1,931	435	7	1.61	1.40
7	France	115,259	1,757	303	5	1.47	1.00
8	Hong Kong	71,689	9,396	68	9	7.84	1.80
9	Australia	60,718	2,322	331	13	1.94	2.60
10	Brazil	57,744	268	581	3	0.22	0.60
11	India	37,838	27	171	0.1	0.02	0.02
12	Chile	34,557	1,775	188	10	1.48	2.00
13	Austria	27,796	3,048	45	5	2.54	1.00
14	UK	27,665	403	672	10	0.34	2.00
15	Mexico	22,703	172	181	1	0.14	0.20
16	Indonesia	22,238	79	138	0.5	0.07	0.10

17	Poland	22,207	588	100	3	0.49	0.60
18	Serbia	20,794	2,401	91	11	2.00	2.20
19	Greece	18,067	1,752	89	9	1.46	1.80
20	Vietnam	17,469	176	9	0.1	0.15	0.02
21	Portugal	16,393	1,618	43	4	1.35	0.80
22	Spain	15,816	338	325	7	0.28	1.40
23	Philippines	14,777	131	342	3	0.11	0.60
24	Malaysia	14,683	441	45	1	0.37	0.20
25	Romania	13,543	714	97	5	0.60	1.00
26	Singapore	13,167	2,213	8	1	1.85	0.20
27	New Zealand	11,853	2,370	64	13	1.98	2.60
28	Czechia	11,503	1,070	45	4	0.89	0.80
29	Peru	11,300	333	202	6	0.28	1.20
30	Thailand	11,233	160	155	2	0.13	0.40
31	Hungary	10,300	1,072	76	8	0.89	1.60
32	Slovenia	10,080	4,847	6	3	4.05	0.60
33	Ukraine	9,234	214	24	0.6	0.18	0.12
34	Belgium	9,145	782	41	4	0.65	0.80
35	Netherlands	8,280	481	9	0.5	0.40	0.10
36	Switzerland	7,984	908	0	0	0.76	0.00
37	Iran	6,756	78	214	2	0.07	0.40
38	Israel	5,969	640	28	3	0.53	0.60
39	Argentina	4,988	108	24	0.5	0.09	0.10
40	Qatar	4,190	1,492	0	0	1.25	0.00
41	Croatia	4,084	1,008	60	15	0.84	3.00
42	Denmark	3,944	676	31	5	0.56	1.00
43	Sweden	3,626	354	28	3	0.30	0.60
44	Bulgaria	3,558	521	31	5	0.43	1.00
45	Azerbaijan	3,548	343	38	4	0.29	0.80
46	Jordan	3,372	323	4	0.4	0.27	0.08
47	Finland	3,339	601	4	0.7	0.50	0.14
48	Canada	2,978	77	42	1	0.06	0.20
49	UAE	2,900	286	1	0.1	0.24	0.02

50	Bolivia	2,859	238	12	1	0.20	0.20
51	China	2,578	2	0	0	0.00	0.00
52	Moldova	2,502	623	19	5	0.52	1.00
53	Armenia	2,329	783	7	2	0.65	0.40
54	Kazakhstan	2,219	115	1	0.1	0.10	0.02
55	Afghanistan	2,153	53	9	0.2	0.04	0.04
56	Lebanon	2,153	319	11	2	0.27	0.40
57	Bangladesh	1,915	11	5	0	0.01	0.00
58	Slovakia	1,714	314	22	4	0.26	0.80
59	Ireland	1,585	313	1	0.2	0.26	0.04
60	Dominican Republic	1,564	141	0	0	0.12	0.00
61	Colombia	1,508	29	62	1	0.02	0.20
62	South Africa	1,482	24	18	0.3	0.02	0.06
63	Bahrain	1,394	761	3	2	0.64	0.40
64	Trinidad and Tobago	1,301	923	18	13	0.77	2.60
65	Pakistan	1,243	5	12	0.1	0.00	0.02
66	Ecuador	1,006	55	13	0.7	0.05	0.14
67	Tunisia	962	80	4	0.3	0.07	0.06
68	Nepal	952	31	8	0.3	0.03	0.06
69	Myanmar	895	16	3	0.1	0.01	0.02
70	North Macedonia	860	413	13	6	0.34	1.20
71	Palestine	852	159	6	1	0.13	0.20
72	Estonia	822	619	6	5	0.52	1.00
73	Uruguay	777	222	3	0.9	0.19	0.18
74	Saudi Arabia	650	18	15	0.4	0.02	0.08
75	Iraq	638	15	2	0	0.01	0.00
76	Nigeria	605	3	6	0	0.00	0.00
77	Venezuela	597	21	7	0.2	0.02	0.04
78	Honduras	587	57	15	1	0.05	0.20

79	Norway	580	105	12	2	0.09	0.40
80	Mali	536	25	0	0	0.02	0.00
81	Barbados	532	1,846	12	42	1.54	8.40
82	Jamaica	490	164	15	5	0.14	1.00
83	Mongolia	457	135	0	0	0.11	0.00
84	Tanzania	456	7	4	0.1	0.01	0.02
85	Channel Islands	389	2,193	0	0	1.83	0.00
86	Zambia	358	18	1	0.1	0.02	0.02
87	Kuwait	350	79	0	0	0.07	0.00
88	Sri Lanka	323	15	25	1	0.01	0.20
89	Guinea-Bissau	305	147	0	0	0.12	0.00
90	Cyprus	251	205	1	0.8	0.17	0.16
91	Cuba	222	20	0	0	0.02	0.00
92	Iceland	185	535	0	0	0.45	0.00
93	Guinea	182	13	2	0.1	0.01	0.02
94	Haiti	170	15	0	0	0.01	0.00
95	Uzbekistan	150	4	0	0	0.00	0.00
96	Algeria	148	3	1	0	0.00	0.00
97	Morocco	141	4	2	0.1	0.00	0.02
98	Malta	131	295	1	2	0.25	0.40
99	Ivory Coast	125	4	2	0.1	0.00	0.02
100	Mauritius	121	95	0	0	0.08	0.00
101	Ethiopia	119	1	0	0	0.00	0.00
102	Kyrgyzstan	119	18	0	0	0.02	0.00
103	Liechtenstein	119	3,102	0	0	2.59	0.00
104	Bermuda	106	1,716	0	0	1.43	0.00
105	French Guiana	102	323	1	3	0.27	0.60
106	Seychelles	94	943	0	0	0.79	0.00
107	Zimbabwe	90	6	0	0	0.01	0.00
108	Burundi	83	7	0	0	0.01	0.00
109	Lesotho	81	37	0	0	0.03	0.00
110	Togo	81	9	1	0.1	0.01	0.02

111	Syria	71	4	0	0	0.00	0.00
112	Maldives	68	121	0	0	0.10	0.00
113	Kenya	61	1	0	0	0.00	0.00
114	Cambodia	60	3	0	0	0.00	0.00
115	Libya	59	8	0	0	0.01	0.00
116	Mozambique	55	2	2	0.1	0.00	0.02
117	Senegal	55	3	0	0	0.00	0.00
118	Malawi	50	2	3	0.1	0.00	0.02
119	Botswana	47	19	0	0	0.02	0.00
120	Monaco	45	1,129	0	0	0.94	0.00
121	Sudan	42	0.9	0	0	0.00	0.00
122	Rwanda	28	2	0	0	0.00	0.00
123	Sao Tome and Principe	24	105	0	0	0.09	0.00
124	CAR	21	4	0	0	0.00	0.00
125	Bahamas	20	50	0	0	0.04	0.00
126	Liberia	15	3	0	0	0.00	0.00
127	Madagascar	14	0.5	0	0	0.00	0.00
128	Marshall Islands	13	216	0	0	0.18	0.00
129	Papua New Guinea	13	1	0	0	0.00	0.00
130	Chad	11	0.6	0	0	0.00	0.00
131	Equatorial Guinea	8	5	0	0	0.00	0.00
132	Gabon	6	3	0	0	0.00	0.00
133	Yemen	6	0.2	0	0	0.00	0.00
134	Mauritania	5	1	0	0	0.00	0.00
135	Eritrea	3	0.8	0	0	0.00	0.00
136	Sierra Leone	2	0.2	0	0	0.00	0.00
137	Benin	0	0	0	0	0.00	0.00

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138	Cameroon	0	0	0	0	0.00	0.00
139	Comoros	0	0	0	0	0.00	0.00
140	Costa Rica	0	0	0	0	0.00	0.00
141	DRC	0	0	0	0	0.00	0.00
142	El Salvador	0	0	2	0.3	0.00	0.06
143	Georgia	0	0	0	0	0.00	0.00
144	Ghana	0	0	0	0	0.00	0.00
145	Niger	0	0	0	0	0.00	0.00
146	Paraguay	0	0	0	0	0.00	0.00
147	Réunion	0	0	0	0	0.00	0.00
148	St. Barth	0	0	0	0	0.00	0.00
149	Saint Martin	0	0	0	0	0.00	0.00
150	St. Vincent Grenadines	0	0	0	0	0.00	0.00
151	Samoa	0	0	0	0	0.00	0.00
152	Timor-Leste	0	0	0	0	0.00	0.00
153	Turkey	0	0	0	0	0.00	0.00

Key:
Data used were obtained from WHO/World meters from 2nd to 8th of September, 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 ≤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
CPM means cases per million
DPM means death per million

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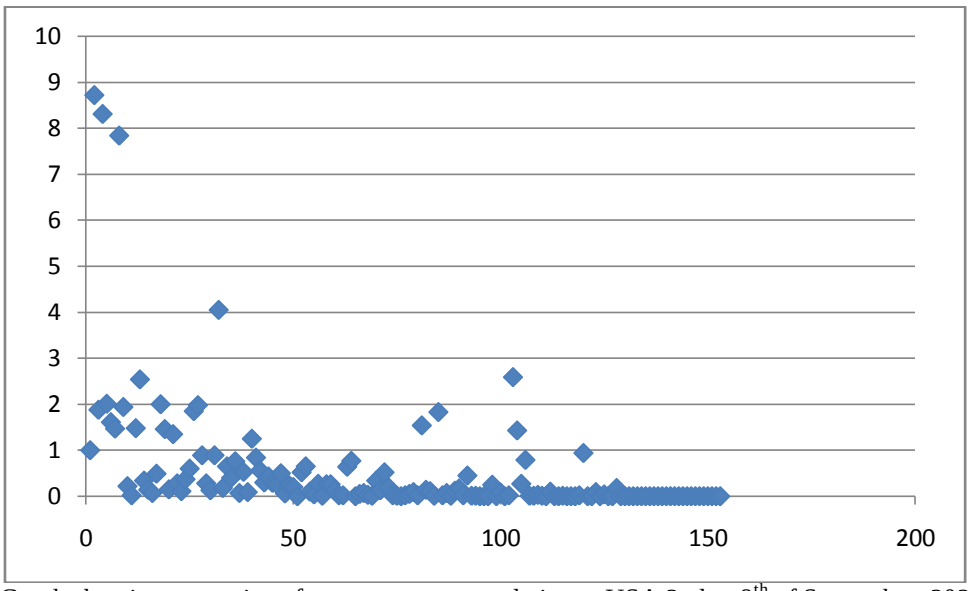

Figure 1: Graph showingcomparison factor per country relative to USA 2nd to 8th of September, 2022. The X-axis representsthe Comparison (Oyepata) factor, Y-axis represent countries.

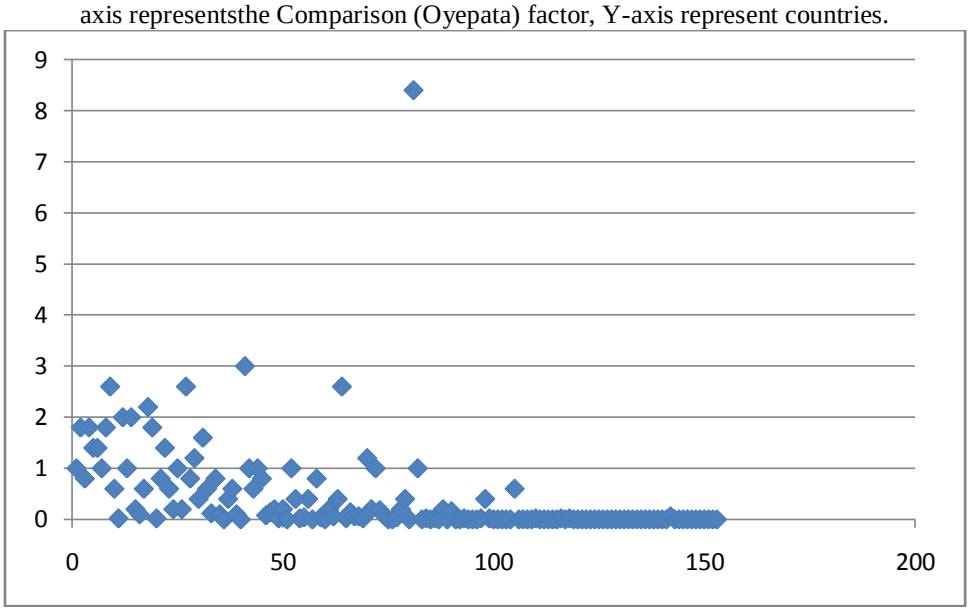

Figure 2: graph showing death Oyepata factor caused by Covid-19 for each country relative to the USA from 2nd to 8th of September, 2022. The X-axis representsthe Comparison (Oyepata) factor, Y-axis represent countries.

III. DISCUSSION

The symptoms of COVID-19 are variable depending on the type of variant contracted, ranging from mild symptoms to critical and possibly fatal illness[39,40]. Common symptoms include coughing, fever, loss of smell (anosmia) and taste (ageusia), with less common ones including headaches, nasal congestion and runny nose, muscle pain, sore throat, diarrhea, eye irritation, and toes swelling or turning purple,[41] and in moderate to severe cases breathing difficulties.[42] People with the COVID-19 infection may have different symptoms, and their symptoms may change over time. Three common clusters of symptoms have been identified: one respiratory symptom cluster with cough, sputum, shortness of breath, and fever; a musculoskeletal symptom cluster with muscle and joint pain, headache, and fatigue; a cluster of digestive symptoms with abdominal pain, vomiting, and diarrhea[43,44].

Africa has been a good home to several infectious diseases such as dengue fever, smallpox, measles chickenpox, Ebola, and polio disease[46-49]. In many cases, vaccinationhas been developed

against some of these infections or the body's immune system has successfully found a way to defend against these pathogens[50-53]. This may have had a beneficial effect against exposure to the same or related organism. There is the likelihood of the virus spreading fast across African populations within a minimal period causing a large proportion to have been exposed to the virus without manifesting obvious symptoms and may have even recovered. This may provide explanation to the reason Africa appeared not to be relatively affected by the pandemic that has gripped the world for a long time.

There has been a severe upsurge of the virus in Asian continent. There has also been several argument as explanation for these, such poor cases report from the onset, mutation, inadequate policy and approach in the initial management of the virus and slow vaccine availability[54-57]. American continent appears to have more infectivity and less reports of mortality from the new variant of Covid-19. Seasonal changes might have been responsible for the undulating phases in cases and mortality report about the virus. Africa has been least plagued by all variants at all phases. Also, most European countries have a lesser mortality ratio when compared to American continents. These observations are interesting, compared to previous works on the cumulative effect of the virus[58]. European Countries like UK, Spain and Greece has higher death comparism factor than case comparism while the rest have higher case comparism factor. Reason for this is not fully understood. Selective, environmental and genetic variation may be a contributing factor.

Africans appear to be unaffected from this seemly uncontrollable and lethal unleash. Apart from fewer cases of the infection,Africans haveshownthe potential to have much lesser mortality even when comparedto the case of the infection[58-59]. This suggests that the African body systemhas over time developed a more progressive,robust and faster immune response that reduces chances of the virus causing disease-related health complications. Compared to previous cumulative observation, though the mortality rate remained higher than other western countries, the USA has made a remarkable stride in preventing and reducing the cases of infection compared to several other countries that suffered the same fate from the virus. From available data, Africa which generally is classified as the third world or underdeveloped do not have severe medicalconsequences of the infection, and when infected they tend to recover faster with a lower chance of complications and mortality.

As previously noted, Africans lives as a community and in dense clusters which is different to most western countries that exist in the solitary system[34,58]. Thus, it is expected thatmost individualsin Africa may have been exposed to the virus without knowing or developing major symptoms. This has made several observers around the world 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 robustcompared to Dutch children[59]. Childhood Exposure to the pathogenic organismmay have boosted the immune system and protected children from developing certain allergies and other infectious diseases, on later exposure to a similar allergen or pathogen[59,60]. This view is also supported by data and comparison factors obtained from Haiti. Haiti is currently the poorest country in the Latin America and Caribbean region and among the least developed countries in the world[61,62]. They have one the least case of infection and mortality resulting in little to no significant value of comparison factor. Thus, childhood or early exposure to some diseases in poor countriesmay have encouraged a more robust immune response to the same or related infection. Therefore, several African countries are both vulnerable and potentially more defensive against the coronavirus.

IV. CONCLUSION

lots have been achieved in understanding and managing Covid-19 virus. There has been a resurgence in certain continent, but Africa has remain unaffected cases and death of the virus recorded.

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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