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Coronavirus (SARS-CoV-2) Transmission and the Extent of Damage to Host may Relates to the Presence in Particular Weather Zone : An Review ".

Abu Mohammad Azmal Morshed

[1] Department of Chemistry, Bangladesh University of Textiles(BUTEX), Dhaka- 1208.

***Corresponding Author:Abu Mohammad Azmal Morshed,** Department of Chemistry, Bangladesh University of Textiles(BUTEX), Dhaka- 1208, **Email**: azmal.morshed@gmail.com,

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Abstract

The existence and harmful potential of SARS-CoV-2 may depend mainly on two variables: first- Speed of spread to the community and second-how long they will exist in the specific weather zone. Observation of the work is that, the rate of transmission and destruction in a particular climate zone depends on their existence duration. As long as the SARS-CoV-2 takes to undergo large community infection after the first case in a particular weather zone, the longer may the possibility of existence of SARS-CoV-2 in that area. Relatively, longer a community infection lasts in a particular weather zone, SARS-CoV-2 generation may continue to lose their ability to harm the affected host.

Keywords: Weather, generation, infection, virus, destruction etc.

Background and aim:

Coronavirus (SARS-CoV-2) began to spread from Wuhan (China) on December, 2019 [1] nowadays it has spread to all parts of the world [2]. The pandemic of SARS-CoV-2 continue to cause fears of death for people around the universe. Virus experts, researchers and health workers around the world are lost in the real reason of difference of effectiveness from country to country even among areas. The article may able to remove the dilemmas that have been created about the variation of damage or the difference in spread and exist time in different countries/area.

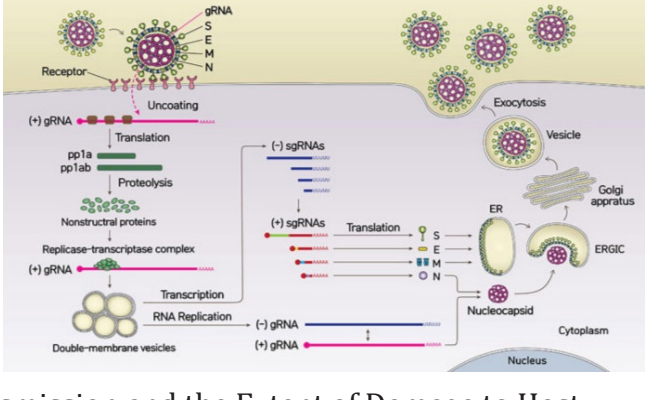
Materials and Methods:

Various databases, Eg: PubMed, Scopus, Google Scholars, BioRxiv, different web search engines were used to find out the publication regarding the Novel coronavirus up to 12 July, 2020. Literature searches were carried out using keywords: Coronavirus-2019, 2019-nCoV, COVID-19, and Novel Coronavirus (SARS-CoV-2/HCoV-19) using whole genomic data.

Discussion:

Some of confined ideas on the prevalence and harmful effects of SARS-CoV-2 in different climatic zones are revealed through this article. SARS-CoV-2 achieve living suitability for new weather conditions by changing their behavior by the genome (RNA) modification [3] and makes them suitable for existing in different weather zones. The speed of transmission and the potential for damage to the host body by SARS-CoV-2 depend on the characteristics obtained by genome (RNA) modification (Figure-1).

Figure 1: SARS -CoV-2 numbers multiplication by genome(RNA) modification(Ref. 3).



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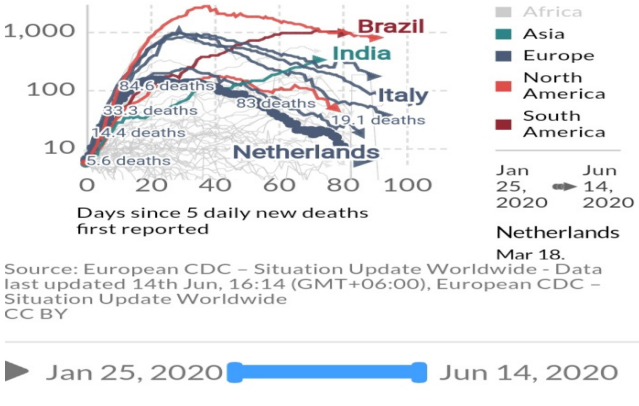
The extend of the spread and effectiveness of SARS-CoV-2 could depend upon how long they required to undergo for a complete change to achieve the stability to adjust in the specific weather zone. Changes of behaviors by the genome (RNA) modification by SARS-CoV-2 in any new weather zone is challenging and time consuming. Since SARS-CoV-2 originate and spread first from the cold region [1], their natural habit of living and spreading in cold regions is more proven. When SARS-CoV-2 infection occur in the cold region, only challenge they face is to get host availability. Therefore, SARS-CoV-2 have been able to spread in a relatively short period of time through widespread infections [3] in cool weather regions or countries (Figure-2). That may why the SARS-CoV-2 has spread rapidly in the cold regions. But whenever the SARS-CoV-2 (suitable for living in cold regions) is transmitted to tropical(East and South Asia, Middle and part of South American areas/ countries) or temperate regions (Africa, Middle - East, parts of Indo-Pak region) or tropical regions such as East & South Asian and Latin American tropical regions, they initially need to overcome two major challenges.

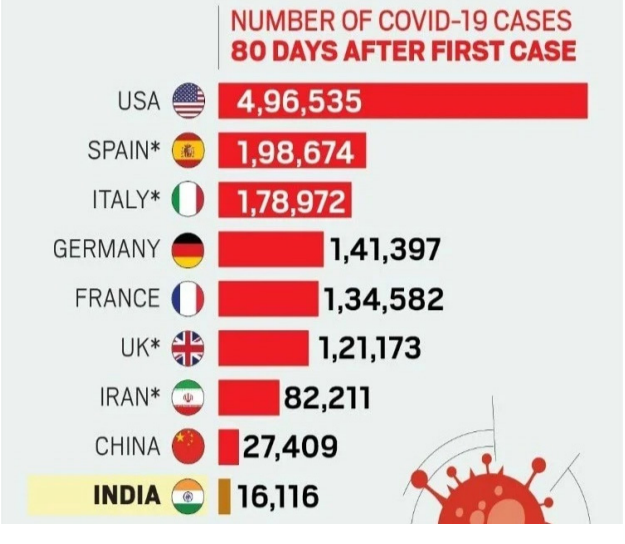
Figure 2: Showing European and American countries(cold regio) spreads SARS-CoV-2 more rapidly then asia countries(India) after the first case found.



The first Challenge - the availability of host and secondly - to achieve the suitability of living in relatively warm or temperate regions. To do so, it is necessary to change the characteristics of Coronavirus by the genome (RNA) modification. Often the SARS-COV-2 may get the living suitability after several generation changes, which is time consuming.

And that is why I am convinced that SARS-CoV-2 initially slower by spread and infection concern in temperate or warmer regions than the colder regions [4, 5]. In my assumption the spread and effectiveness depends on the duration, how fast the SARS-CoV-2 can achieve more host to undergoes repeated characteristic changes by RNA modification in a particular weather zone. The sooner the corona virus (SARS-CoV-2) spreads in a region, the faster the coronavirus completes the generation cycle, and coronavirus lost their harmful ability with the complete the generation cycles [6]. Secondly, the ability to harm the host body is closely related to the time of expansion. Cell multiplication of virus for increasing members is a natural phenomenon, the resulting new members continue to decline their original properties of the mother cell. So the more genetically reconstructed coronavirus members need to achieve living suitability for a new climate zone, the less likely it is that the next generation of SARS-COV-2 lose effectiveness of host destruction. In brief the longer it takes for a SARS-CoV-2 to achieve the habit of living suitability from the first day of infection case in a new climate zone, the less likely it is that members of the next generation of viruses (SARS-CoV-2) will be less harmful to host body (Figure- 3).

Figure 3: Showing difference effectiveness as spread and death of host by SARS- CoV-2 among cold region USA European countries and tropical/temprate areas of India, Iran after 80 days of first case found.



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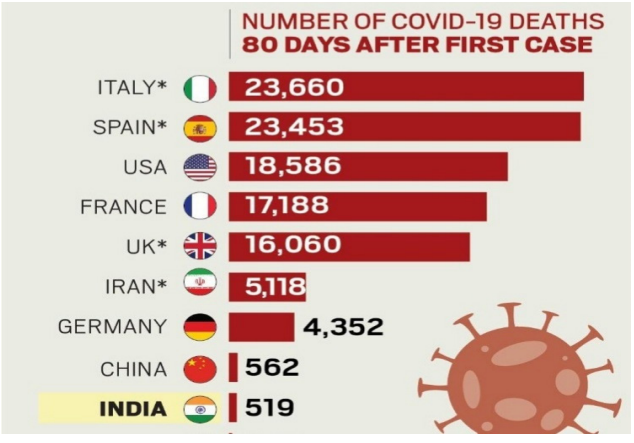
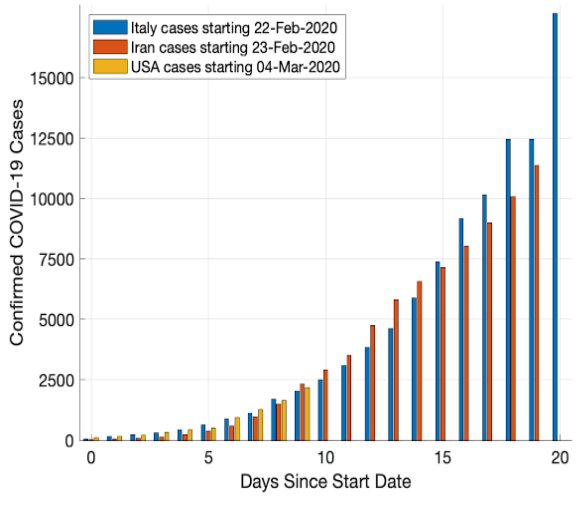


(Ref. India Today, Data Intelligence Unit (DIU), Apr, 20,2020)

That is why SARS-CoV-2 spread in different climatic zones such as Arab countries, Africa, East Asia or the Pak-Indian subcontinent and South Asian and Latin American countries will stay longer, but the severity or harmful effects of the virus may be less. My idea is justified by a review of the spread and prevalence of the coronavirus in Wuhan (China), or European countries and North American countries [7, 8] (Figure- 4).

Figure 4: Shows the cold region(USA, Italy) has comparatively more seed of spreading SARS-CoV-2 then temperate region Iran.



Conclusions:

In light of this discussion, I would like to approach that the spread and harmful ability of the next generation (modified) SARS- CoV-2 is comparatively less than the subsequent spread of SARS-CoV-2 infected with the first generation. However the spread and destruction ability to infected host continue to decrease from generation to generation of SARS-CoV-2. If the initial spread remains slow in any area (affected by next generation SARS-CoV-2) the virus may stay long in that weather zone areas/countries with continued to lose of harmful effects. I propose this article will reduce the fear of spread and the horror of SARS-CoV-2 among hundreds of millions of people.

Decelerations:

I confirm the analysis is completely my own analysis is not harmful at all. Novel Coronavirus (SARS-CoV-2) behave different in areas, host body and weather conditions. So exact characteristics of SARS-CoV-2 mysterious, any confirm prediction is not possible yet.

Financial involvement:

I would like to confirm that the work was done totally by my own, was not done under any project and there was no support of funds from any source.

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References :

1. Zhanwei Du, L. Wang, S. Cauchemez, X. Xu, X. Wang, B. J. Cowling, and L. A. Meyers, "Risk for transportation of coronavirus disease from Wuhan to other cities in China" Emer. infec. dise., 26 (5), p-10, p-4-9, (2020).
2. 4.H. Harapan and et. al., "Coronavirus disease 2019 (COVID-19): A literature review", J. of Infec. and Pub. Health, 13,(5,), P-667-673,(2020). https://doi.org/10.1016/j.jiph.2020.03.01
3. https://www.genengnews.com/news/coronavirus-genomic-and-subgenomic-rna-architecture-mapped/
4. C.Kenyon. "Why Has COVID-19 Spread More Extensively in Europe than Asia?. Preprints,(2020), 2020050200 (doi: 10.20944/preprints202005.0200.v1)
5. M. Sorbello, K. El-Boghdadly and et. al.,"The Italian coronavirus disease 2019 outbreak: recommendations from clinical practice",Anaesthesia, 75(6), p- 724-732, (2020).
6. A. M. Azmal Morshed," Possible Life-Cycle of Novel Coronavirus (Covod-19) with a complete generation timeframe ", J. Viro. & Dis., Vol.2(1), p-1-2, (2020).
7. Chih-C. Lai, C.-Yi Wang, Ya-Hui Wang, S.-Chung Hsueh, W.-Chien Ko, Po-Ren Hsueh," Global epidemiology of coronavirus disease 2019: disease incidence, daily cumulative index, mortality, and their association with country healthcare

Cite this article: Coronavirus (SARS-CoV-2) Transmission and the Extent of Damage to Host relates to the Existence Duration in Particular Weather Zone, Am J of Viro and Dis. 2020; 2(3): 01-04.

resources and economic status", Int. J. of Antimic. Agents, 10, p-59-46, (2020).
8. W-S. Yu, G-Da Tang, Li Zhang, R. T. Corlett, "Decoding the evolution and transmissions of the novel pneumonia coronavirus(SARS-CoV-2/HCoV-19) using whole genomic data", Zoological Research, 41(3), p-247-249, (2020).

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