Review of: "A Mathematical Characterisation of COVID-19 in Mauritius"

Kamal Shah[1]

1 University of Malakand

Potential competing interests: No potential competing interests to declare.

In this work, an attempt has made at determining those metrics for Mauritius and comparing them with that of the rest of the world. Authors have developed mathematical models of the progression of COVID-19 in Mauritius and in numerous other countries primarily in Europe. An intriguing observation has made when the growth rate and the ceiling value of the mathematical models obtained for different countries have compared. They have computed the reproduction number, which showed that how many subjects a contagious individual was infecting on average at the onset of the pandemic in Mauritius. This value in turn allowed the determination of the percentage of the population needing immunity to stop the spread of the virus. The case fatality rate as well as the crude mortality rate for different countries are also compared and contrasted.

The presented results seem very good. Also the paper has been written very well. I recommend for publication.

I recommend some minor revision like

1. Authors should reconstruct abstract in such a that it surrounds what have been found what will be find.
2. The first few sentences of abstract must be included in introduction.
3. Some recent work regarding forecasting of COVID must be cited like: *Chaos, Solitons & Fractals* 138 (2020): 109926. *Results in Physics* 20 (2021): 103702. *Axioms* 10.3 (2021): 228.
4. Revise conclusion also.
5. Improve resolution of Figure 3:
6. Recently on modeling side for COVID-19 huge work been done. Include some fresh work of 2023.