

Review of: "Qualitative Analysis of a Time-Delay Transmission Model for COVID-19 Based on Susceptible Populations With Basic Medical History"

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Potential competing interests: No potential competing interests to declare.

Review: Qualitative Analysis of a Time-Delay Transmission Model for COVID-19 Based on Susceptible Populations with Basic Medical History

Description:

This paper falls within the domain of applied mathematics, specifically utilizing conventional mathematical techniques for stability analysis. The authors have studied the SEIR COVID-19 epidemic model of susceptible with a basic medical history. The novelty of their work is in introducing time-delay transmission model and analyzing the equilibrium point of the model and stability analysis. The novelty of this paper is the introduction of a continuous-time delay, a refinement to existing delay models, particularly the one originally proposed by Zhang Liying et al. [8].

Comments

Clarity of Novelty: The authors should provide a clear and comprehensive explanation of the novel aspects of their model, particularly in comparison to Zhang Liying et al.'s [8] delay model.

Literature Review: The paper's literature review requires expansion and improvement. It would be beneficial for the authors to include a more extensive review of relevant references, especially those related to time-delay models. We recommend considering additional sources such as Igor Nesteruk's book "COVID-19 Pandemic Dynamics" to enhance the review.

Comparison with Existing Models: The authors should aim to more effectively compare their results with those of other delay models, such as Zhang Liying et al.'s [8] model. This comparison should be presented in a clear and straightforward manner for readers to understand.

Model Realism: Despite the model's simplicity, the authors should discuss how it can be extended or adapted to better represent and analyze real-world data. Addressing this aspect will enhance the paper's practical relevance.

In conclusion, addressing these comments would significantly improve the paper's quality and make it suitable for publication.

