

PEER-REVIEW REPORT

Name of journal: *World Journal of Experimental Medicine*

Manuscript NO: 83089

Title: The role of children in the Bulgarian COVID-19 epidemic – a mathematical model study

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05626712

Position: Peer Reviewer

Academic degree: MD

Professional title: Academic Editor, Academic Research, Assistant Professor, Attending Doctor, Research Scientist

Reviewer's Country/Territory: Iran

Author's Country/Territory: Bulgaria

Manuscript submission date: 2023-01-06

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-02-24 14:26

Reviewer performed review: 2023-03-04 13:34

Review time: 7 Days and 23 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty

Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation
Scientific significance of the conclusion in this manuscript	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Summary: A model based analysis to explore the role of pediatrics in Covid-19 pandemic. Comments: 1. The authors used the age range of 0-19 years to represent children. However, we know that this age range contains other groups, including infants and adolescents. 2. CORE TIP: " This hypothesis and the other two we outlined as reasons for this age-restricted ...". The information given in the core tip must be clear and informative per se. It is unclear what are two reasons. 3. It has been demonstrated children with pre-existig comorbidities (cardiovascular diseases, cancer renal failure) are at risk for severe covid-19. It is suggested to add a sentence in this regard to the Introduction section and cite the following two papers for cancer: - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7779976/> - <https://pubmed.ncbi.nlm.nih.gov/32765192/> 4. COVID-19 and Children: " Fortunately, the course of the disease after the complex treatment (immunomodulatory



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therapy with iv immunoglobulins and corticosteroids, inotropic drugs and anticoagulants) was favorable in all patients." This part is not relevant to the study objective and can be safely omitted. 5. Covid-19 and Children" " The airborne nature of the disease was also disputed [9]." This information is hard to understand. Please explain more. 6. Covid-19 and children: " We use mathematical modeling (time series analysis) to question these claims in the case of Bulgaria and to show the price of the lack of policy in schools." it is suggested the authors express the study objective clearly (instead of "to question these claims"). 7. " The third hypothesis is that the spread among children accelerates with the increasing R_0 of different dominating viral variants." What is R_0 ? It requires an explanation.

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Academic degree: MD

Professional title: Surgeon

Reviewer's Country/Territory: Italy

Author's Country/Territory: Bulgaria

Manuscript submission date: 2023-01-06

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-02-24 14:33

Reviewer performed review: 2023-03-05 00:31

Review time: 8 Days and 9 Hours

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	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Dear Author, thank you for sharing this research. I found it very interesting and well-written. No more change is needed. Best regards