

# Review of: "A brief overview on COVID-19 and its comparison with SARS, MERS, and H1N1"

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**Potential competing interests:** No potential competing interests to declare.

A brief overview on COVID-19 and its comparison with SARS, MERS, and H1N1

The topics of this paper are interesting, though well known. The structure and content must be revised, and results have to be better explained by authors.

Title has to be shorter.

Abstract has to clarify the goal, results and health and social implications of these pandemics.

Authors have to structure the paper as follows.

- Introduction
- Study design
- Results and discussion
- Conclusion

Avoiding in the just mentioned sections, sub-headings that create fragmentation of the paper.

Introduction has to better clarify the research questions of this study and provide more theoretical background about COVID-19 and these pandemics, also considering environmental factors. After that authors can focus on the topics of this study to provide a correct analysis for fruitful discussion (See suggested readings that must be all read and used in the text). This citation [1][2][3][4][5][6][7][8][9][10][11][12][13][14][15][16][17][18][19][21][22][23][24][25][26][27][28], can be better written as [1-28], it is better. The same for others.

Methods of this study is not clear. Authors have to clarify if this study is:

- A narrative review explains the existing knowledge on a topic based on all the published research available on the topic.
- A systematic review searches for the answer to a particular question in the existing scientific literature on a topic.
- A meta-analysis compares and combines the findings of previously published studies, usually to assess the effectiveness of an intervention or mode of treatment.

Authors have to avoid subheadings that create fragmentation and confusion. If necessary, can use bullet points (same comments for section of results and all sections).

Sections of results has to be clearly indicated.

A comparative analysis has to be better developed and indicated.

About the sentence a main role is the time, because COVID-19 is occurred recently when there is a high mobility of people worldwide.: “although the novel COVID-19 shows the same clinical features with these diseases, it reveals the higher potential for outbreaks and consequently for causing global pandemics than MERS, H1N1, and SARS.” Clarify the text.

Section 5.1-5.3, clarify the acronyms for readers.

Sections 6-7 can be merged in discussion and authors have to systematize comparative analysis.

To reiterate, avoiding in the just mentioned sections, a lot of headings and sub-headings that create fragmentation and confusion of the paper.

Discussion.

First, authors have to synthesize the main results in a simple table of comparative analysis to be clear for readers and then show what this study adds compared to other studies.

Conclusion has not to be a summary, but authors have to focus on manifold limitations of this study and provide suggestions of health, crisis management and social policy, as well as how nations can prevent next pandemics with good governance, vaccination and nonpharmaceutical measures of control.

Overall, then, the paper is interesting, but structure is confused. Theoretical framework is weak, and some results create confusion... structure of the paper has to be improved; study design, discussion and presentation of results have to be clarified using suggested comments to be submitted to some international journal.

Suggested readings of relevant papers that have to be read and all inserted in the text and references.

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Coccia M. 2021. Evolution and structure of research fields driven by crises and environmental threats: the COVID-19 research. *Scientometrics*, vol. 126, n. 12, pp. 9405-9429. <https://doi.org/10.1007/s11192-021-04172-x>

Coccia M. 2023. High potential of technology to face new respiratory viruses: mechanical ventilation devices for effective healthcare to next pandemic emergencies, *Technology in Society*, vol. 73, May 2023, n. 102233,

<https://doi.org/10.1016/j.techsoc.2023.102233>

Benati I.,Coccia M. 2022. Effective Contact Tracing System Minimizes COVID-19 Related Infections and Deaths: Policy Lessons to Reduce the Impact of Future Pandemic Diseases. *Journal of Public Administration and Governance*, vol. 12, n. 3, pp. 19-33. DOI: <https://doi.org/10.5296/jpag.v12i3.19834>

Bai, X., Xu, M., Han, T., Yang, D. 2022Quantifying the impact of pandemic lockdown policies on global port calls.*Transportation Research Part A: Policy and Practice*, 164, pp. 224–241

Magazzino C., Mele M., Coccia M. 2022. A machine learning algorithm to analyze the effects of vaccination on COVID-19 mortality. *Epidemiology and infection*, 1–24. Advance online publication. <https://doi.org/10.1017/S0950268822001418>

Zhijun, C., Jian, G., Xia, Z., ...Haiqi, T., Yun, Z. 2023. COVID-19 epidemic prevention and control status and Research Progress of Related Technologies in Chinese Ports. *Proceedings of SPIE - The International Society for Optical Engineering*, 12340, 123401N

Coccia M. 2023. Sources, diffusion and prediction in COVID-19 pandemic: lessons learned to face next health emergency[J]. *AIMS Public Health*, 2023, 10(1): 145-168. doi: 10.3934/publichealth.2023012

Zhu Y., Xin J. 2020. Association between ambient temperature and COVID-19 infection in 122 cities from China, *Science of the Total Environment*, <https://doi.org/10.1016/j.scitotenv.2020.138201>

Akan, A.P.; Coccia, M. 2022. Changes of Air Pollution between Countries Because of Lockdowns to Face COVID-19 Pandemic. *Applied Sciences* 12, no. 24: 12806. <https://doi.org/10.3390/app122412806>

Srivastava, A. 2021. COVID-19 and air pollution and meteorology-an intricate relationship: A review, *Chemosphere*, 263,128297

Coccia M. 2022. Preparedness of countries to face COVID-19 pandemic crisis: Strategic positioning and underlying structural factors to support strategies of prevention of pandemic threats, *Environmental Research*, Volume 203, n. 111678, <https://doi.org/10.1016/j.envres.2021.111678>.

Bashir, M.F., Bilal, B.M., Komal, B., 2020. Correlation between environmental pollution indicators and COVID-19 pandemic: A brief study in Californian context. *Environ. Res.* 109652.<https://doi.org/10.1016/j.envres.2020.109652>

Coccia M. 2022. Optimal levels of vaccination to reduce COVID-19 infected individuals and deaths: A global analysis. *Environmental Research*, vol. 204, Part C, March 2022, Article number 112314, <https://doi.org/10.1016/j.envres.2021.112314>

Núñez-Delgado A., Bontempi E., Coccia M., Kumar M., Farkas K., Domingo, J. L. 2021. SARS-CoV-2 and other pathogenic microorganisms in the environment, *Environmental Research*, Volume 201, n. 111606,

<https://doi.org/10.1016/j.envres.2021.111606>.

Benati I., Coccia M. 2022. Global analysis of timely COVID-19 vaccinations: Improving governance to reinforce response policies for pandemic crises. *International Journal of Health Governance*. <https://doi.org/10.1108/IJHG-07-2021-0072>

Xu K, Cui K, Young L-H, Hsieh Y-K, Wang Y-F, Zhang J, et al. Impact of the COVID-19 Event on Air Quality in Central China. *Aerosol and Air Quality Research* 2020b; 20: 915-929.

Coccia M. 2021. The impact of first and second wave of the COVID-19 pandemic: comparative analysis to support control measures to cope with negative effects of future infectious diseases in society. *Environmental Research*, vol. 197, June, n. 111099, <https://doi.org/10.1016/j.envres.2021.111099>

Rosario Denes, K.A., Mutz Yhan, S., Bernardes Patricia, C., Conte-Junior Carlos, A., 2020. Relationship between COVID-19 and weather: case study in a tropical country. *Int. J. Hyg Environ. Health* 229, 113587.

Coccia M. 2021. Comparative Critical Decisions in Management. In: Farazmand A. (eds), *Global Encyclopedia of Public Administration, Public Policy, and Governance*. Springer Nature, Cham. [https://doi.org/10.1007/978-3-319-31816-5\\_3969-1](https://doi.org/10.1007/978-3-319-31816-5_3969-1)

Askitas, N., Tatsiramos, K., Verheyden, B. 2021. Estimating worldwide effects of non-pharmaceutical interventions on COVID-19 incidence and population mobility patterns using a multiple-event study (Open Access)(2021) *Scientific Reports*, 11 (1), art. no. 1972.

Coccia M. 2020. Factors determining the diffusion of COVID-19 and suggested strategy to prevent future accelerated viral infectivity similar to COVID, *Science of the Total Environment*, Number: 138474.

<https://doi.org/10.1016/j.scitotenv.2020.138474>

Shen, L., Zhao, T., Wang, H., (...), Zhu, Y., Shu, Z. 2021 Importance of meteorology in air pollution events during the city lockdown for COVID-19 in Hubei Province, Central China *Science of the Total Environment*, 754,142227

Bontempi E., Coccia M., Vergalli S., Zanoletti A. 2021. Can commercial trade represent the main indicator of the COVID-19 diffusion due to human-to-human interactions? A comparative analysis between Italy, France, and Spain, *Environmental Research*, vol. 201, Article number 111529, <https://doi.org/10.1016/j.envres.2021.111529>

Coccia M. 2022. COVID-19 pandemic over 2020 (with lockdowns) and 2021 (with vaccinations): similar effects for seasonality and environmental factors. *Environmental Research*, Volume 208, 15 May 2022, n. 112711.

<https://doi.org/10.1016/j.envres.2022.112711>

Haque, S.E., Rahman, M. 2020. Association between temperature, humidity, and COVID-19 outbreaks in Bangladesh, *Environmental Science and Policy*, 114, pp. 253-255

Chowdhury T., Chowdhury H., Bontempi E., Coccia M., Masrur H., Sait S. M., Senjyu T. 2022. Are mega-events super spreaders of infectious diseases similar to COVID-19? A look into Tokyo 2020 Olympics and Paralympics to improve

preparedness of next international events. *Environmental Science and Pollution Research*,  
<https://doi.org/10.1007/s11356-022-22660-2>

Yuan, J., Li, M., Lv, G., Lu, Z.K. 2020. Monitoring transmissibility and mortality of COVID-19 in Europe ((2020) *International Journal of Infectious Diseases*, 95, pp. 311-315.

Coccia M. 2021. The effects of atmospheric stability with low wind speed and of air pollution on the accelerated transmission dynamics of COVID-19. *Journal: International Journal of Environmental Studies*, vol. 78, n. 1, pp. 1-27, <https://doi.org/10.1080/00207233.2020.1802937>

Sarkodie, S.A., Owusu, P.A. 2020. Impact of meteorological factors on COVID-19 pandemic: Evidence from top 20 countries with confirmed cases. *Environmental Research*, 191,110101

Flaxman, S., Mishra, S., Gandy, A., Unwin, H.J.T., Mellan, T.A., Coupland, H., Whittaker, C., (...), Bhatt, S. 2020. Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe (Open Access), (2020) *Nature*, 584 (7820), pp. 257-261.

Diao, Y., Kodera, S., Anzai, D., (...), Rashed, E.A., Hirata, A. 2021. Influence of population density, temperature, and absolute humidity on spread and decay durations of COVID-19: A comparative study of scenarios in China, England, Germany, and Japan, *One Health*, 12,100203

Coccia M. 2021. How do low wind speeds and high levels of air pollution support the spread of COVID-19? *Atmospheric Pollution Research*, vol. 12, n.1, pp. 437-445., <https://doi.org/10.1016/j.apr.2020.10.002>.

Rahimi, N.R., Fouladi-Fard, R., Aali, R., (...), Conti Gea, O., Fiore, M. 2021 Bidirectional association between COVID-19 and the environment: A systematic review *Environmental Research*, 194,110692

Coccia M. 2021. Pandemic Prevention: Lessons from COVID-19. *Encyclopedia*, vol. 1, n. 2, pp. 433-444. doi: 10.3390/encyclopedia1020036

Islam, N., Bukhari, Q., Jameel, Y., (...), Massaro, J.M., D'Agostino, R.B. 2021, COVID-19 and climatic factors: A global analysis. *Environmental Research*, 193,110355

Song, P., Han, H., Feng, H., (...), Li, X., Li, X. 2022 High altitude Relieves transmission risks of COVID-19 through meteorological and environmental factors: Evidence from China, *Environmental Research* 212,113214

Coccia M. 2021. High health expenditures and low exposure of population to air pollution as critical factors that can reduce fatality rate in COVID-19 pandemic crisis: a global analysis. *Environmental Research*, vol. 199, Article number 111339, <https://doi.org/10.1016/j.envres.2021.111339>

Li, H.-L., Yang, B.-Y., Wang, L.-J., (...), Ma, R.-F., Yang, X.-D. 2022. A meta-analysis result: Uneven influences of season, geo-spatial scale and latitude on relationship between meteorological factors and the COVID-19 transmission, *Environmental Research* 212,113297

Coccia M. 2022. Effects of strict containment policies on COVID-19 pandemic crisis: lessons to cope with next pandemic impacts. *Environmental Science and Pollution Research*, DOI: 10.1007/s11356-022-22024-w, <https://doi.org/10.1007/s11356-022-22024-w>

Coccia M. 2022. COVID-19 Vaccination is not a Sufficient Public Policy to face Crisis Management of next Pandemic Threats. *Public Organization Review*, <https://doi.org/10.1007/s11115-022-00661-6>

Coccia M. 2022. Improving preparedness for next pandemics: Max level of COVID-19 vaccinations without social impositions to design effective health policy and avoid flawed democracies. *Environmental Research*, vol. 213, October 2022, n. 113566. <https://doi.org/10.1016/j.envres.2022.113566>